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ABSTRACT

Live broadcast television lessons in the four subjects: Japanese, Maori, Spanish, and Technology, were broadcast from the New Zealand Correspondence School via Satellite and Sky television to selected schools around the country during 1996. The trial project ran from April to November, 1996, involving 86 schools, including primary, intermediate, secondary and area. This evaluation focused on analyzing the course delivery and interactivity of the 1996 pilot program, and establishing what aspects were useful to teachers and students in meeting their learning goals, and what elements proved to be deficient and in need of improvement. The sections are: "Evaluation"; "Data Gathering and Analysis"; "Findings"; "The Effectiveness and Usefulness of Interactive Television for Teaching and Learning"; "Comparing the Roles of the Broadcast and Classroom Teacher"; "How Useful Was the Support Material for Teaching"; "Teacher Professional Development"; "Interaction Between Broadcaster and Receivers"; "Technology"; "Differences in the Experiences of Participating Schools by Area and Type"; and "Recommendations for Improving Interactive Television Courses." Twenty tables and figures illustrate findings and the forms and questionnaires used in the project are appended. (AEF)

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INTERACTIVE SATELLITE TELEVISION EVALUATION PROJECT

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A REPORT
FOR THE MINISTRY OF EDUCATION

BY

THE NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH

**A Report for the Ministry of Education
by the
New Zealand Council for Educational Research
Te Rūnanga o Aotearoa mō te Rangahau I te Mātauranga**

Interactive Satellite Television Evaluation Project

**David Harris
NZCER**

**New Zealand Council for Educational Research
Wellington
1997**

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New Zealand

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EXECUTIVE SUMMARY

Purpose of the Evaluation

Live broadcast television lessons in, Japanese, Maori, Spanish, and Technology, were broadcast from the New Zealand Correspondence School via Satellite and Sky television to selected schools around the country during 1996. The trial ran from April to November in 1996, involving 86 schools, including primary, intermediate, secondary, and area. This evaluation of the Correspondence Schools' Interactive Satellite Television project was carried out for the Ministry of Education to evaluate the projects' pilot year. The research questions sought to examine; the effectiveness of the ITV programme, the nature and extent of the interaction, the usefulness of ITV for teacher professional development, how helpful the support material was to the teachers, establish how the technology used in the ITV course affected it, highlight any differences between the types of schools involved, and examine the differences in the ITV programme as used by urban and rural schools.

The Findings

There was variety in the ways schools implemented the programme. Students in some cases were selected by the class and in other cases individuals were given the choice whether or not to participate. Consequently over a third (35%) of the 1,500 students surveyed were above or below the recommended student participation levels of year 7 and 8.

Effectiveness of the courses

- The great majority of teachers (83%) considered that there were advantages to teaching a subject via the Interactive television course. These advantages included; the ITV course being the only way of bringing this subject into the school; it provided a balanced and well structured lesson plan, with resources that were all reusable; the audio visual medium provided an enhancement to the presentation of course material; the interaction between the broadcast teacher, classroom teacher and student was an incentive and motivating influence; the ITV course added to the existing course for that subject in the school, and there was great value from the obvious subject expertise of the presenter.
- A large number of teachers (77%) also replied that there were problems that created difficulties to participating in the course. These included: the course not being at the level of their students; the presentation not being varied enough and taking advantage of what the television medium can do; the 'live to air' broadcast schedule could not be fitted into the existing school timetable causing the live interaction part of the course to be excluded; the pace of the course was too fast for many, especially in the languages classes and did not allow for sufficient revision and reinforcement; the interaction was of an extremely limited nature with the live phone calls being criticised as too quick and superficial; some technology problems hindered communication; and

the lack of subject knowledge by classroom teachers frustrated many.

- The ITV course was the only means by which the courses could have been taught in the participating schools for 98% of Spanish classes, 79% of Japanese, 60% of Technology, and 51% of Maori course classes.

The support material

- The support material was reported as quite useful or very useful by 76% of teachers, and somewhat or moderately useful by 20%, and not useful by only 3% of teachers. Of the most important features of the support material, the student worksheets were rated highest, followed by the audio cassettes for the languages, and teachers packs for informing the teachers about course objectives and structure.
- Further use of the support material, beyond the enrolled ITV class, was conducted by 42% of teachers. The form that this additional use of the course material took included: plans for use in subsequent years for teaching the subject, making it available at the time of the course to a second audience such as cultural clubs or other teachers, and for possible future use as a school resource.

Teacher Professional Development

- Only half (48.5%) of the classroom teachers entering into the course felt prepared to teach the subject. Factors that helped preparation included the early provision of the course material which was well presented, prior knowledge of the subject, and communication with the broadcast teacher about the course. Factors that hindered preparation included a lack of knowledge about the course, insufficient time to overcome this lack of knowledge about the subject, and technical problems that disrupted preparation.
- However, as a result of this course 42% of teachers had increased their understanding of the curriculum area they had taught either highly or very highly. A further 36% said they had moderately increased their understanding of the curriculum.

Interaction

- A majority of teachers (52%) considered that the broadcast lessons fitted into the classroom lessons supplied with the teachers' material, either quite well or very well, with a further 26% considering that it fitted adequately, in general creating a well-integrated broadcast and classroom course.
- The interactive communications media were less favourably viewed as integrating into the course, with 48% of teachers saying it promoted communication either not very well or marginally, while a further 29% considered it only to be adequate in enabling communication between classrooms and the broadcast teacher.
- There was very little communication between students and the broadcast teacher (30% had some direct communication). And only 22% of classroom teachers experienced a moderate to very high amount of communication with the broadcast teacher.

- Useful elements to the communication that did occur included; support for the course, feedback from the broadcast teacher, clarification of teaching points such as language pronunciation, and motivation to continue with the course.
- Over a third of teachers (37%) considered that there were factors which obstructed interaction; including there being no easy access in the school to the means of communication, such as a telephone in the classroom, and the course having problems within it, such as speed, which discouraged communication between classroom teachers, students, and the broadcast teacher.
- The students' engagement with the broadcast teacher's teaching was thought of as adequate by 48% of classroom teachers, low and very low by 36% of teachers and only high and very high by 16% of teachers.
- Less than half of the teachers (41%) replied that there was any value to the interaction between their students and the broadcast teachers. However, this varied greatly by course with 71% of Spanish teachers replying that there was value in the interaction, then 38% of both Maori and Japanese teachers, and 34% of Technology teachers.
- Teachers commented on the overall effectiveness of the ITV environment with 40% replying that it was quite or very effective, 35% considered it moderately effective, and 25% thought it marginally or not at all effective.
- Live to air broadcasting was not favoured by 51% of teachers and thought essential to the course by 29%. Reasons given for not wanting the broadcasts to be live included: the fast pace of the live course not allowing for revision, the difficulty of fitting the broadcast into the school timetable which has sporting, cultural and other events which do not allow for live watching; and a teaching structure which does not allow for watching the live weekly broadcast such as 6-day timetables.

Technology

- A small majority of teachers (52%) had no problems with the technology involved in the ITV course, and 26% had some difficulty in ensuring the equipment functioned properly. Overall, unless there was a problem with not having the technology, such as no phone in the classroom, many problems were overcome. Two technical deficiencies were highlighted regarding the course. The first was that of unclear phone lines with static during the student interaction, and the second was the poor sound recording quality on some taped segments of the broadcast.
- The reliability of the TV broadcasts was thought of highly, with 75% reporting high or very high reception quality and 70% of teachers considering that they had the support necessary to maintain the equipment.

The rural urban differences

- The rural school teachers were more likely to be teaching multiple classes with the ITV course.
- A slightly higher number of urban school teachers thought there were advantages with the course.

School type differences

- The most experienced teachers of the broadcast subjects were found in the secondary school, who also had a higher percentage of teachers saying there was no advantage in the ITV course for them.
- Teachers in the Area schools were more likely to say there was limited value in the interaction, with more Primary school teachers considering that the course helped their students learn the subject.

The recommendations

Improve the Interaction

The interaction came under the most criticism in the course, with the exception of the Spanish course whose teacher had a proactive approach to communicating with the classroom teachers, and in doing so stimulated regular maintained interest and motivation in the course. A more structured yet flexible model of interaction needs to be established to overcome the overall low rates of interaction.

This may be achieved by;

- Ensuring that student interaction with the broadcast teacher has a purpose and is directed through a goal orientated approach,
- Making the presentation of the material more lively by utilising more of the capacity of the television medium,
- Providing a variety of methods by which interaction can be facilitated to allow the participants to have a choice that is suitable for them and to allow a larger number of participants to have a chance for interaction
- Allowing for differences in school timetables and the different pace that the many learners have. Schools should be able to make decisions about how often and when the course will be delivered and taught.
- Encouraging participation in the course through a culture of interactivity, which should enhance many of the benefits of the ITV course.

Teacher Professional Development

For a number of teachers there was a real need to know more about the course they were teaching via ITV; this was particularly the case with the languages. Accordingly the following is recommended to overcome this deficiency;

- Provide a more structured and systematic training procedure for teachers teaching in the ITV programme, including the principles on 'how to teach a language' and 'how people learn languages'. Additionally, at an early stage, the language objectives and components could be introduced along with how the course will run, what are the interaction avenues that could be

included, and training in using any technology a teacher may be unfamiliar with.

- A regional facilitator was suggested as a way this training could be provided nationwide, and also act as a facilitator for local interaction.

The Support Material and Technology

The support material was well thought of yet the following improvements were suggested, including:

- Providing a clear year-long course plan; improving the presentation with colour and graphics; and including extension and assessment materials. Regarding the technology: clear recording and communication options are wanted with choice about how the interaction is to be technically achieved.

INTRODUCTION

In 1996, the Ministry of Education conducted a trial project on interactive television (ITV). From April to November 1996, television lessons were broadcast live from the New Zealand Correspondence School, via satellite and Sky television, to 90 selected schools around the country, including primary, intermediate, secondary and area schools.

The trial project provided courses aimed at years 7 and 8 (Forms 1 and 2) in four subjects: Japanese, Maori, Spanish, and Technology. Teacher guidelines and lesson objectives were mailed to each school. Once a week, at 11 a.m., a half hour programme in each subject was broadcast for the classes enrolled in that course.

A few minutes were allocated in each session for student interaction with the teacher broadcasting from the Correspondence School. Classroom teachers could have access to this teacher by phone or fax during the week.

Another hour of back-up instruction followed; this included technology research, design, and construction exercises, or vocabulary and sentence structure practice, along with reference material.

Why trial interactive television broadcasts?

The Ministry of Education contracted the Correspondence School to trial ITV with the following objectives in mind:

- to support the work of teachers and enhance educational opportunities for students, particularly in languages and technology;
- to provide teacher professional development programmes to complement the student learning programmes;
- to facilitate the teaching of languages, particularly in rural schools and in Forms 1 to 4 schools where there is no specialist language teacher;
- to explore the nature of satellite (and Sky TV) technology in enhancing student learning and teacher professional development, particularly in languages and technology.¹

The Ministry of Education called for this evaluation to be conducted because:

Broadcast technologies have the advantage of reaching a vast number of people and become cheaper on a number reached basis as that number increases.

However, in the past they have been seen as a one-way means of communication. To address this situation students in this pilot will be able to communicate with the central studio whilst watching programmes. Interactivity is achieved in a variety of ways. During the programme students can phone or fax presenters. These facilities are also available at other

¹ Interactive Television Project. General Information. The Correspondence School.

times.²

Critical questions arising from the objectives of the project were:

- Was the course material delivered to the receiving school in such a way that it met the learning requirements of the students and teachers?
- Did the chosen model of interaction allow for useful interchange between participating teachers and students?
- Did the technology function reliably?

The three language courses were designed to serve as an introductory year of learning, assuming that the student had no prior knowledge of that language. These courses went into schools where the classroom teacher might or might not have any prior experience of teaching that language.

While there was variation among teachers about how long and at what levels they had taught the language before, for the purposes of this study, any previous teaching of *this subject* defined teachers as "experienced", and no previous teaching of *this subject* defined them as "inexperienced".

Over a third of the teachers who responded to the evaluation survey had previously taught the language that they were now teaching with the ITV course. Nearly two thirds had not taught it previously.³ This meant that many classroom teachers were learning the language alongside their students. Another question was, therefore:

- * Did this ITV model actually enable the mixing of the learner and teacher roles to achieve effective learning, and in particular, could it enable language teaching?

Selection of schools

A 1995 *Education Gazette* notice outlined the interactive television project: its purpose, duration, provision of course and support material, and technical assistance. It also gave the criteria for selection of participating schools. These included:

- location - urban/rural
- size
- class levels
- type of school
- attitude to provision of second language programmes
- technical policy and planning, and present use of/attitude towards information and communication technology for curriculum delivery
- willingness to participate in all or a substantial portion of the programme
- undertaking to participate in the project evaluation by providing data, feedback and observation
- level of commitment demonstrated by the principal, Board of Trustees, enthusiastic teachers, and provision of facilities, resources, and technology

² Interactive Satellite Television Project, Specification for an evaluation, Ministry of Education Research Section, Wellington, 1995.

³ Teacher questionnaire returns, a fuller explanation is in the findings section, participation.

- timetable and scheduling flexibility.⁴

From the 300 schools which expressed an interest, 90 were selected. To participate in the trial, each school was provided with television reception equipment for tuning into Sky TV or a satellite broadcast, as well as telephone and fax equipment and line requirements. Satellite technology was used to provide the signal to schools in locations not covered by Sky.

The selected schools also received the following information to help them implement the programme:

- description and location advice on the reception equipment
- room requirements for running the course
- description of support materials accompanying the course broadcasts
- amount of time to be allocated to the course
- levels and types of interaction between classroom teachers, broadcast teachers, and students
- how courses linked to the syllabuses or draft curriculum statement
- statement that the languages would be taught assuming no prior knowledge.

⁴ Interaction Satellite television Project, Application for Selection, The Correspondence School, July 1995.

EVALUATION

The evaluation focused on analysing the course delivery and interactivity of the 1996 pilot programme, and establishing what aspects were useful to teachers and students in meeting their learning goals, and what elements proved to be deficient and in need of improvement.

To address the project objectives, and assess the overall effectiveness of ITV, the following research questions were drawn up:

- How effective and useful is ITV for teaching and learning, both from the perspective of teachers who have taught the topic before, and those who have not; and when compared to traditional forms of teaching? How do students view the effectiveness of ITV learning?
- What is the nature and extent of use of the support material, and how helpful/useful is it, both during and between the broadcasts, in terms of its role in teacher professional development and as a means of curriculum delivery?
- How useful and effective is ITV for teacher professional development, both with respect to learning how to use the technology, and then integrating that into a classroom learning situation, and also as a means for teachers to learn curriculum material that is new to them, for example the Japanese language?
- What is the nature, extent, and added value of the interaction between the schools receiving the interactive lessons, and the Correspondence School, both during and between lesson broadcasts?
- What are the significant technical factors that influence how ITV works in the classroom, including equipment setup, maintenance and support, reliability, reception quality, how well the various media technology involved (TV, fax, and phone) integrate into classroom use, and consideration of how classroom 'environment' affects ITV? Do teachers need new skills to use the equipment in their teaching?
- Do rural and urban schools differ in their experiences with ITV, and if so, how?
- Do different school types (primary, intermediate, secondary, area) differ in their experiences of ITV, and if so, how?

⁵ Appendix to Interactive Satellite Television Programme Evaluation Research Contract for the Ministry of Education by the New Zealand Council for Educational Research, 1996.

DATA GATHERING AND ANALYSIS

Advisory Committee

To help guide the evaluation, an Advisory Committee was established. It met twice, first to discuss the objectives, methods, instruments, and direction of the evaluation research, and secondly to examine the information collected and the conclusions which emerged.

Members of the Advisory Committee represented: the Correspondence School's ITV project team; Copeland Wilson and Associates, who have extensive experience in television and video production; the Ministry of Education's curriculum implementation and research sections; the New Zealand Council for Educational Research; the New Zealand Educational Institute; the Post Primary Teachers Association; and the New Zealand Schools Trustees Association.

Collection of information

The relatively small number of schools taking part in the pilot programme meant that all could be approached to collect their impressions on the ITV courses.

Midway through the project, 4 of the original 90 schools had dropped out. Another notified its withdrawal soon after. When the evaluation began, another school returned the questionnaires, but explained that the school had withdrawn from the course. The questionnaires returned by this school were not used in the data analysis.

A total of 81 schools responded to requests for information about their involvement in the course – almost 95% of the 86 schools which completed at least half the ITV trial. The results can therefore be fairly assumed to reflect the experiences of all participants.

In all, the research drew on:

- 4 interviews with broadcasting teachers
- 306 responses to classroom teacher questionnaires
- 1552 responses to student questionnaires
- 40 school visits with interviews and observations.

To maximise the amount of information gained, it was collected in two stages, in September and again in November. The first was intended to gain impressions of the set up and early phase of the course; the second was intended to obtain information about the end period and the participants' conclusions after they had completed or nearly completed the course.

Questionnaires

Two questionnaires, one for teachers (see Appendix A) and one for students (see Appendix B), were sent out twice, in September and November, to collect quantifiable data on what was happening in the schools. For each course the school was registered in, 1 teacher and 5 student questionnaires

were sent out. Each teacher selected five students to respond. These were completed by participating teachers and students, and returned over the following weeks.

Interviews

Visits and interviews provided a qualitative expansion of how the ITV trial was actually experienced. Classroom teachers, students and the Correspondence School broadcasting teachers were all interviewed. In addition, researchers took notes according to the broadcast lesson observation guide. (For the interview schedules, see Appendices C and D; for broadcast lesson observations, see Appendix E.)

Forty schools were visited to conduct the interviews, and, where possible, to observe the ITV broadcast in the classroom. The visits took place during the periods when the questionnaires were being answered. Many of these visits involved multiple interviews with several teachers and a number of students. They ranged from 75 minutes to 3 hours, depending on how many participants were available for interviews. The place where the course was taught could be noted, and often the principal elaborated on the position and potential of ITV in the school.

Correspondence School teachers—the three language teachers and one of the technology teachers—were interviewed in October (see Appendix F) to gain an understanding of how the course progressed from their perspective.

The researchers also observed broadcasts in each course, and went through the support material provided to teachers and students.

Pilot testing

The research instruments were tested during August at nine schools in the Wellington, Hutt Valley, and Kapiti coast areas. Draft versions of the questionnaires were sent to teachers in these schools, followed by a visit to discuss the questionnaire's relevance and ease of use. The visits also allowed discussion of the ITV project in general; this helped serve as a guide for visits and interviews in the main school visit schedule.

The student questionnaire was also tested, to ensure that it was suitable for the students of various ages involved in the project.

Analysis

The responses to the questionnaires were coded and entered into a SAS database to produce frequencies and cross tabulations. Analysis was then based on:

- course
- area
- school type
- stage 1 (September) compared with stage 2 (November)
- experienced teachers of the subject compared with inexperienced teachers.

In the information presented below, the percentages may not add up to 100% for every item. This is because not everyone returning the questionnaire answered every question.

FINDINGS

Implementing the project

Schools took a variety of approaches to implementing the project. Each school decided:

- * what courses to bring into the school
- * who should teach each course
- * which students would take the course.

Selection of students

The courses were designed for years 7 and 8 (Forms 1 and 2). In practice, the students involved in the project came from various levels in the schools. However, the majority (69%) were from Years 7 and 8. Of the 1552 students who returned questionnaires:

100 (6%) were below Year 7
515 (33%) were in Year 7
555 (36%) were in Year 8
251 (16%) were in Year 9
102 (7%) were in Year 10
29 (2%) were above Year 10.

In some schools the courses were entirely optional: students, along with their parents, made the decision to learn the subject via the ITV programme. In others, teachers vetted or selected from the applicant students. Elsewhere, teachers invited selected students to take the course; or the school chose a whole class to be involved.

Where participation was an option, students could be excused from a number of other classes to attend an ITV lesson. This placed conflicting demands on the student, with time devoted to ITV being taken away from the class they had missed.

How students felt about missing the other class because of ITV lessons was strongly influenced by the value the student attached to the other class. During interviews, it became apparent that the higher the form level of the student, the less willing that student was to miss what they thought of as 'important', especially an examinable course, for an ITV 'optional' class. The teachers of the classes which the students left sometimes felt the class was disrupted by students arriving and leaving. These issues did not arise where a whole class was chosen.

Timetabling

Because the ITV project started in the second term of the school year, the timetable had to be adjusted to allow for the additional course, or courses. To be viewed live, the broadcast had to be

seen at 11.00 am. So this 'mandatory' time had to be arranged, and a follow-up hour placed in the timetable wherever it could fit in.

Schools took different approaches. In the schools with lower years and a 'home room' environment, where the teacher had the class for most if not all of the instructional time at school, the course could be most easily fitted in around the other topics that were being taught, and timing was at the discretion of the teacher.

In schools where the students moved from classroom to classroom and teacher to teacher, timetabling became more of an issue. If a whole class, or a collective of students from different classes, was doing the course, a time was often found for the ITV class in an 'option' period in the timetable.

The live broadcast often fell in the school's regular interval. The classroom teacher then encouraged students to put this time towards the course. During interviews, teachers reported that students were most willing to do this when they were enjoying the course and could keep up, and so feel a sense of achievement.

If students were falling behind, and felt they were not learning from the course, then encouraging them to participate in the ITV trial during this time was difficult.

Some schools, most notably at secondary level, organised their timetable around 6 day learning topic cycles, or a certain number of weeks' 'block' approach to topic learning. This was at odds with a weekly broadcast course schedule. In such circumstances, it became necessary to video the broadcasts and view them when the schedule allowed.

Such differences in class scheduling of the broadcasts were not the only reasons why the programmes were not watched live. Where there were 2 or more classes involved in a course at the same school, usually only one class could either fit into the viewing room, or was scheduled to be involved in the topic at that time on that day.

Where the course was an option for individual students to take up, they might have to watch the recorded broadcast at lunchtime or after school. This became more likely as the form level of students rose. In a very small number of cases reported during interviews with the higher form level students, no follow-up lesson time was provided during school hours. This aspect of the course was allocated as 'homework'.

Classes taught

Different teachers ran differing numbers of classes with their ITV topic: 51 (18%) of responding teachers said they taught 2 or more classes.

Number of students

There was great variety in the number of students taught by each teacher for each topic:

- 8% taught 1 - 10 students,
- 21% taught 11 - 20 students,
- 39% taught 21 - 30 students,
- 10% taught 31 - 35 students,
- 15% taught more than 35 students.

For the three languages, time for the teacher to assist each student's individual learning tended to lessen as class numbers rose. For technology, ensuring resources for all, maintaining safety when working with potentially hazardous materials and tools, and facilitating students to take part in the programme, all became more difficult as the numbers of students increased.

Ending participation early

Table 1 shows how many student and teacher questionnaires were received for each course, including both the September and November returns.

Table 1
Questionnaires received – teachers and students

	Teachers		Students	
	N	(%)	N	(%)
Maori	84	(27)	420	(27)
Spanish	41	(13)	197	(13)
Japanese	87	(29)	456	(29)
Technology	94	(31)	479	(31)
Total	306	(100)	1552	(100)

The questionnaires were returned during two periods. Returns in September outnumbered returns in November. Of the 306 teacher questionnaires, 176 came from the September period, and 130 from the November period. As student questionnaires were returned with each teacher questionnaire, their proportions were similar.

In the November interviews, several schools stated that they had finished their involvement in the course for the year, either because they considered it time to finish teaching that topic for the year, or because they had stopped using the course some time earlier.

The evaluation did not include finding out how many schools, classes within schools, or students, withdrew from the programme before the broadcast schedule was completed. It is not therefore possible to specify how many withdrawals during the year occurred as a result of dissatisfaction with the course, staff changes where the ITV teacher left, a decision to finish teaching the course for the year before the broadcast schedule stopped, or other reasons.

However, during the interviews, teachers and principals did make clear the reasons for withdrawals, as they perceived them. The most frequently mentioned reasons are summarised below.

Student options

Where there was an option for student involvement, students might also opt to leave and take up another option.

Selective use of the course

The technology course, with its four week 'modular' subject approach, was especially prone to teachers picking one topic – for example 'Food technology – water', not participating in the topic that immediately followed, then taking up the next topic. This was feasible because the technology topics were more discrete 'units', as opposed to the continuous learning of languages.

Block timetabling

In schools with a 'block' approach to subject timetabling, the April to December broadcast schedule did not fit in easily. Instead, a video tape of the broadcasts could be used more intensively over a shorter period of time. Once the topic block time ended, the course stopped.

Dissatisfaction

Where there was dissatisfaction with the pace, interactivity, or content of the course, and especially in one case, when an alternative arose, participation in the course might cease.

THE EFFECTIVENESS AND USEFULNESS OF ITV FOR TEACHING AND LEARNING

Are there any advantages in teaching this topic with ITV?

Overall, an overwhelming majority (83%) said yes, 8% were unsure, and 5% said no, there were no advantages.

Teachers' views on the effectiveness of the ITV programme varied according to:

- * how the course was implemented
- * whether the teacher had taught that subject previously
- * the subject itself.

The percentage of teachers who had taught the subject before varied tremendously for each course:

- Spanish 12 % (N = 5)
- Japanese 24 % (N = 21)
- Technology 28 % (N = 26)
- Maori 65 % (N = 55)

Table 2 shows levels of agreement that there were advantages by course, with teachers of Spanish being the group most inclined to see advantages, followed by Japanese, then Technology, and finally Maori.

Table 2
Advantages in teaching this topic with ITV

Advantages	Maori		Spanish		Japanese		Technology	
	n	(%)	n	(%)	n	(%)	n	(%)
Yes	65	(77)	37	(90)	73	(84)	78	(83)
Unsure	12	(14)	1	(2)	6	(7)	7	(7)
No	5	(6)	1	(2)	4	(5)	6	(6)

The less experience teachers had, the more inclined they were to feel there were advantages to using ITV. A high proportion of inexperienced teachers—88%—thought there were advantages, compared with 78% of experienced teachers. Only 4% of inexperienced teachers felt there was no advantage in using ITV, against 7% of experienced teachers. In the unsure category, 6% of teachers new to the topic were unsure about any advantage, compared to 12% of experienced teachers.

Types of advantage perceived

Teachers could also comment on what types of advantages they perceived. Their comments can be placed into 7 categories. The percentages of teachers in each course making such comments is shown below, followed by a summary of typical comments. Comments enclosed in quotes use teachers' own words.

1. Using ITV is the only way to teach this course (in this school at this time)

Spanish 56%, Japanese 52%, Technology 16%, Maori 14%.

Summary of comments: ITV is the only way to provide this course in the school; it provides teacher expertise, including correct pronunciation of languages, and well thought out lesson plans, materials and resources.

2. ITV provides a valuable resource

Technology 33%, Maori 23%, Japanese 22%, Spanish 17%.

Summary of comments: The ITV course provides the resource of a balanced, well researched and structured lesson plan, which includes written, video, audio (in the languages), hard to get resources such as cultural videos or expert technical commentary, and lesson plans. All are in a reusable form which saves time for the teacher not having to assemble them.

3. The audio-visual medium is an advantage

Spanish 22%, Technology 21 %, Japanese 20%, Maori 17%.

Summary of comments: TV is useful for showing the visual and audio aspects of the course, in both language expression and recognition, and for illustrating technical instruction. The video image can present information from places we cannot get to as a class, show demonstrations and other audio visual information, and even reflect how information technology can be used. It is also provided in a usable and in a reusable format.

4. The interaction is an advantage

Spanish 41%, Japanese 16%, Technology 13%, Maori 11%.

Summary of comments: "The interaction through ITV has become an incentive for my students, with the broadcast teacher motivating them, and sustaining their interest in the topic"⁶. This interaction begins with a confident explanation of the topic, the students recognise the expertise, this encourages watching and listening. It helps bring the atmosphere of technology exploration, and encouragement of language pronunciation, into the classroom.

5. ITV adds to the current course

Maori 24%, Technology 17%, Japanese 8%, Spanish 5%.

⁶ Quoted material is taken from comments in the Teachers' Questionnaire

ITV is adding to a current course by covering material which is not covered in our teaching of this topic at the moment. It added useful ideas and materials, reduced planning workloads, and offered a different point of view and style of teaching.

6. TV provides an expert teacher for this subject

Spanish 24%, Technology 15%, Japanese 15%, Maori 12%.

Expertise was obviously evident in the production of the ITV course. It is clear that teachers very experienced in their field are involved.

7. There are some advantages, but these are offset by the disadvantages

Maori 8%, Japanese 5%, Technology 4%, Spanish 0%.

The advantages are somewhat offset by the disadvantages of it being too fast, too slow, the interaction not as developed as it should have been, or just not suitable for my students.

Were there any problems in teaching this topic with ITV?

A majority again answered yes to this question, with 77% saying there were problems, 5% unsure, and 15% saying there were no problems. Table 3 shows the response by course topic, with 81% of teachers of Maori, 80% of Japanese, 79% of Technology and 61% of Spanish saying there were problems.

Table 3
Problems in teaching this topic with ITV

Advantages	Maori		Spanish		Japanese		Technology	
	n	(%)	n	(%)	n	(%)	n	(%)
Yes	68	(81)	25	(61)	70	(80)	74	(79)
Unsure	5	(6)	3	(7)	5	(6)	3	(3)
No	11	(13)	11	(27)	9	(10)	15	(16)

More of the experienced teachers—21%—considered there were no problems, compared with 12% who had not taught the topic before. A similar percentage of experienced teachers (73%) and inexperienced teachers (79%) felt there were problems with the course. The 'unsure' response was chosen by 6% of those who had taught the topic previously, and 15% of those who had not.

The problems associated with the ITV courses were outlined by teachers as follows:

1. Various difficulties related to the course

Technology 33%, Maori 30%, Japanese 22%, Spanish 10%.

Summary: "The course itself presented some difficulties in teaching it to my students. Included are, the level of the programme's target audience, and my class, not being the same." The course is either too advanced or not advanced enough. The balance of the programme may also be awry, with too much broadcast time spent on non-essential points, such as extensive showing of

children's work at the beginning of the broadcast, at the expense of time for revision and instructional points. "The presentation tends to have the same structure every time, an emphasis on 'talking heads' which my children find dry and not keeping their interest."

The overall structure was sometimes a little unclear, due to a lack of an introduction into the topic, especially troublesome for someone who had not taught the topic before, as it is difficult to pick what is important and should be emphasised with no real knowledge of the topic. An unreality about the course also existed (for the language classes); for instance the children were often told they had done well by the broadcast teacher irrespective of what they actually did, or even if they had not paid attention to the point.

2. The live broadcast timetable

Spanish 27%, Japanese 25%, Technology 24%, Maori 20%.

Summary: Timetable difficulties emerged while trying to adhere to the set broadcast schedule. Other school activities such as sporting or cultural events necessitated missing broadcasts, and either rushing to catch up with the course, or falling behind. There was also no extra time to schedule for catching up, or devoting more time to the course, if it was considered the class was falling behind.

3. The fast pace of the course

Maori 19%, Japanese 18%, Spanish 15%, Technology 12%.

Summary: The pace of the course was too fast, not allowing time for reinforcement of what was being learnt. Even during each broadcast, there was insufficient time allowed for activities such as students repeating words and sentences back to the broadcast teacher. Before the students had finished, the broadcast teacher would move on to the next thing. This inadequate time for broadcast time exercises was especially noticeable when the students were asked to talk to each other to try out the language.

When the course was thought to be going too fast, the problem compounded itself with an initial failure to grasp part of the language, especially grammar and structure, impairing all efforts to learn the language from that point onwards. The course got more and more advanced, and some students fell more and more behind.

4. Limited interaction

Japanese 13 %, Maori 11 %, Technology 7 %, Spanish 7 %.

Summary: "The interaction was very limited, especially when the material was not understood or kept up with by my students. The phone calls had a superficial element about them, and if the students were unprepared for what was to happen during the phone conversation, then my students and myself thought them to be of little value."

5. Technology problems

Technology 10%, Japanese 10%, Maori 10%, Spanish 7%.

Summary: The technology involved in receiving the course presented some difficulties, including difficulty in setting up the equipment, a poor signal, or such weak signal reception so as to make participation impractical, and no readily available support to help with any

difficulties that did arise in maintaining the equipment in working order.

6. Limited knowledge of the topic

Spanish 12 %, Japanese 7 %, Technology 2 %, Maori 2 %.

Summary: "My knowledge of this topic is limited, as I am just starting to learn it, and this leads to some anxiety with me not being able to help the students when they need it, as I cannot offer an expanded explanation due to unfamiliarity with what is being taught".

7. Course too slow

Technology 6%, Maori 4%, Japanese 1%, Spanish 0%.

Summary: The course was actually too slow, with motivated students frustrated by having to wait. In this circumstance, some students felt the course was beneath their level.

Is it likely that this course would have been provided this year *without* the ITV project?

One objective of the ITV project was to facilitate the learning of languages in schools where there may have been no specialist teacher, and a measure of the success for this objective is shown by the responses to this question. Overall, 54% of teachers thought the course would not have happened without the ITV project, 32% replied this course would have been taught anyway, and 10% were unsure.

Among experienced teachers, 56% said the course would have happened, as did 19% of inexperienced teachers. To emphasise how ITV did bring these courses into the school, 69% of inexperienced teachers replied that this topic would not have been taught without ITV, as did 29% of teachers who had previously taught this topic.

This indicates that even where the teacher had some experience, the ITV courses were a catalyst for bringing these topics into schools. The effect varied by course, as shown in Table 4: Maori was the most likely course to have been provided anyway (49%), with Technology next (40%). Japanese was far less likely (21%) to have been taught without the course, and Spanish would have been taught at a mere 2% of the schools offering it for the project, if the ITV course had not been available.

Table 4
Course provided without ITV

	Maori		Spanish		Japanese		Technology	
	n	(%)	n	(%)	n	(%)	n	(%)
Yes	41	(49)	1	(2)	18	(21)	38	(40)
Unsure	7	(8)	2	(5)	8	(9)	15	(16)
No	32	(38)	36	(88)	59	(68)	37	(39)

In their comments, a number of respondents said that the ITV course expanded upon a course that would have occurred anyway. This was most notable for Maori (19%) and Technology (21%). Clearly, Spanish and then Japanese were most likely to have been brought into the school because of the ITV course.

Did the ITV course provide a *unique* advantage for your students' learning?

A majority, 68%, considered that it did provide a unique advantage, 11% said it did not, and 14% were unsure. Positive responses from experienced teachers were 65%, compared to 71% from inexperienced teachers.

Table 5 shows the differences between the courses on the issue of unique advantage, with Spanish viewed as the most likely to have a unique advantage (76%), followed by Japanese (70%), then Technology (67%) and Maori (62%).

Table 5
ITV course as a unique advantage

	Maori		Spanish		Japanese		Technology	
	n	(%)	n	(%)	n	(%)	n	(%)
Yes	52	(62)	31	(76)	61	(70)	63	(67)
Unsure	14	(17)	3	(7)	13	(15)	14	(15)
No	14	(17)	3	(7)	8	(9)	10	(11)

Unique advantages

Teachers' comments described particular unique advantages were as follows.

1. Only opportunity to teach this course

Spanish 59%, Japanese 39%, Maori 17%, Technology 11%.

Summary: "This was the only opportunity for this course to be taught at our school." We had no teacher with experience to teach this project. ITV offers a supportive model for the classroom teacher to use with the broadcast lesson and follow up lessons.

2. Expands on current course

Technology 31 %, Maori 15 %, Japanese 9 %, Spanish 7 %.

Summary: The ITV course serves as an expansion upon what is currently taught at our school. There is a specialist broadcast teacher involved in the course, with expertise providing new ideas, information, techniques, skills and information via visual, audio and written means, other people who are familiar with the topic, and resources in general for the course. The other teachers and guest speakers add an extra to the course that broadens the horizon of the children, for example, the cultural videos in the language programmes. The cultural aspects of the course are more than

the teacher can provide and very valuable for providing a wider ideas of how a language relates to a culture/ideas for technology development as school exercises.

3. Positive teacher/student interaction

Technology 14 %, Japanese 11 %, Spanish 7 %, Maori 5 %.

Summary: The interaction between the student and broadcast teacher was a unique advantage in itself, and this was enhanced by the students in this class becoming aware of other students' learning activities from around the country.

4. Resources contained in the course

Technology 12 %, Maori 6 %, Japanese 5 %, Spanish 5 %.

Summary: "The resources, in video, written, and audio form, provide support to my teaching." It is a self-contained programme with planning, clearly set out, easy to follow, and allowing for expansion.

5. Audio-visual approach

Maori 8%, Spanish 7%, Technology 6%, Japanese 5%.

Summary: The visual approach means students can see and hear the remote teacher, "an improvement on our existing form of correspondence teaching". The TV medium offers a role model covering movement, accent of language, facial expression when speaking, and 'seeing' how language is spoken, and serves as an excellent instructional medium to guide the technology programme.

Do you think there is *another* way to achieve this unique advantage?

Those teachers who felt that ITV did offer a unique advantage were asked to comment on other means of achieving that advantage. It is at this point that ITV's place in teaching was more widely considered – in particular, how ITV compares with the existing means of teaching in the schools.

A sizeable proportion of teachers (20%) thought there was no other viable alternative for achieving the advantages that the ITV programme provided. There was no alternative to bringing the course into the school, as it did not have the teaching expertise or resources, due to remoteness and lack of local specialised teachers, limits on the number of staff which preclude getting more teachers, and/or no-one currently able to teach the ITV topic alone.

By ITV course, the percentages saying there was no other way to achieve the unique advantage(s) offered by the project were:

- Spanish 32 % (N = 13)
- Technology 21% (N = 20)
- Maori 17 % (N = 14)
- Japanese 16 % (N = 14)

A quarter of the teachers (25%) were unsure about alternatives. However, a larger group (34%) thought there *were* ways to achieve, and improve upon, the advantages that the ITV course

provided. By course, the affirmative responses were:

- Japanese 40% (N = 35)
- Spanish 37% (N = 15)
- Maori 33% (N = 28)
- Technology 27% (N = 25)

Three options were stated as avenues for matching or improving upon the ITV advantage. First, 13% of all responding teachers, wanted an experienced teacher of the topic in the school. They considered that any other method attempted would not match the teaching ability of an experienced teacher, with appropriate resources, in front of the class. Secondly, an improved ITV course was supported by 8%, and thirdly, using a variety of communication technologies - as opposed to relying on TV, phone, fax, and postal mail for communication - supported by 9%.

Desired improvements to the course included more flexible timing of course delivery, allowing classroom teachers to select the component, pace, and level they see as appropriate for their students, and increasing the use of the TV medium to achieve a more 'dynamic' presentation.

More inexperienced teachers (36%) than experienced teachers (31%) thought that there were ways of improving the course. But the same pattern occurred among those believing there were no ways of equalling the ITV advantage: more inexperienced teachers (21%) than experienced teachers (19%). But more experienced teachers were unsure about other ways of obtaining the ITV advantage - 29%, compared with 23% of inexperienced teachers.

COMPARING THE ROLES OF THE BROADCAST AND CLASSROOM TEACHER

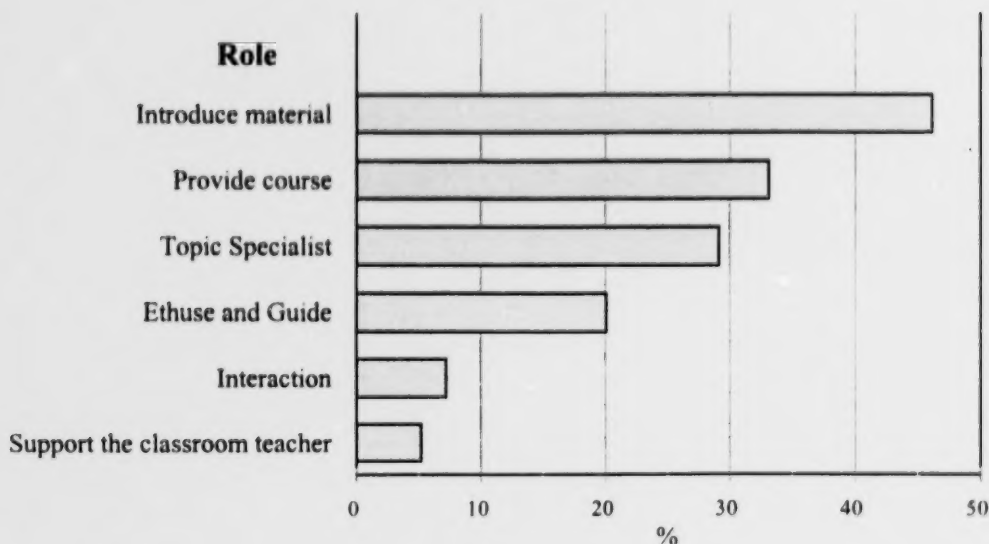
The broadcast teacher's role

The classroom teacher responses show that the most significant contribution the broadcast teacher was perceived to have made was the **initial introduction** to students of the material: 46% ranked this as a broadcast teacher role. It extended to explaining vocabulary, sentence structure, and culture in languages and technology, and demonstrations in the technology course.

The second broadcast teacher role most frequently mentioned, by 33% of classroom teachers, was that of **providing the course**, including complete preparation and overall direction. Almost as many teachers (29%) appreciated that the broadcast teacher fulfilled the role of **topic specialist**, expert in their field, with a command of the topic, including the correct pronunciation of a native speaker in the languages courses, and provider of ideas, examples, and specialists in the technology modules.

The role of **enthusing and guiding** the students through the course was the fourth most frequently mentioned, by 20%, with the task of stimulating student interest, and retaining motivation seen as a key function of the broadcast teacher. **Encouraging interaction** between the broadcast teacher and students was highlighted by only 7% of classroom teachers, but they mentioned that this role improves student commitment and enjoyment of the course. A final role mentioned, by 5%, was that of **complementing and supporting the classroom teacher**, to enable him or her to teach the course in the school.

Figure 1
The role of the broadcast teacher



The classroom teacher's role

This began with running the classroom lessons: 55% of teachers mentioned **running the lessons before and after the broadcasts, and participating in the broadcast sessions** by guiding and helping student involvement. This involved follow-up lessons and activities using the worksheets, materials, audio tapes, and course guidelines and objectives supplied.

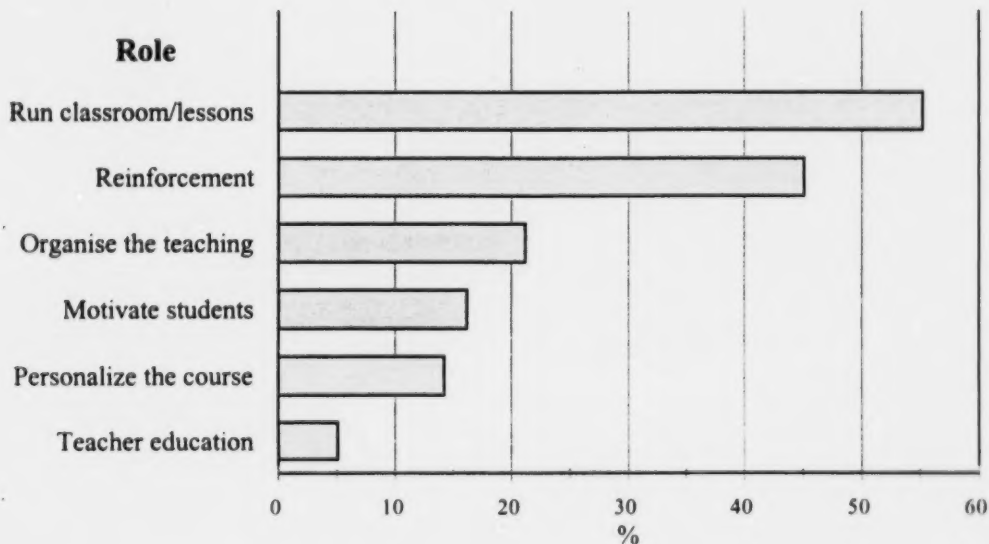
The second most frequently mentioned role of the classroom teacher was that of **reinforcing the course through follow up and revision**. This involved encouraging language practice, providing help when needed, and overall support and guidance.

Administration of the teaching, to manage the organisation of the class as well as helping students to achieve the learning objectives, was mentioned as a role by 21% of teachers. Among the functions included in this role were ensuring materials and equipment were ready, especially for the technology class, monitoring student performance, and maintaining discipline.

Providing motivation and encouragement was listed as a role by 16% of classroom teachers. This included keeping students interested, on task, and relating the course to the students' wider learning. Following on from motivation was **personalisation**, with 14% of classroom teachers saying that ensuring the course was appropriate to each student, and providing reinforcement or extension as necessary, was a main role in teaching the ITV course.

The education of the teacher, or **professional development** by the teacher learning the topic, especially another language, was seen as a classroom teacher role by 5%. These teachers stated that the teacher had to learn the topic to fulfil the other roles of the classroom teacher. One teacher described this as providing a "role model of someone learning via ITV".

Figure 2
The role of the classroom teacher



Students' comments on their learning experience with ITV

Five students were selected by each responding teacher to answer the student questionnaire. To recap, there were 479 responses from students of Technology, 456 Japanese, 420 Maori, and 197 Spanish. It should be remembered that the intended audience was Form 1 and 2 students, and the majority of responding students did come from these years: one third from Form 1 (Year 7), and one third from Form 2 (Year 8). Of the remainder, 6% were from levels below Form 1, 16% were from Form 3, and 9% were from higher levels.

The questions included open areas where the students could say what they liked about an aspect of the course. Consequently, a wide variety of answers was received. The main themes of those responses are presented below.

What students liked

Students were asked to describe the things they liked about the course, as an indicator to what would help their learning. Their responses are summarised below.

1. Learning new things

Close to half, 43%, of students said this was what they liked most about the course, especially the culture surrounding a language, and the practical aspects of technology – although fewer technology students mentioned this.

By course, the results were Spanish 56%, Japanese 54%, Maori 44%, Technology 26%.

2. Participating in course activities, such as design, experimentation, and construction in technology, or singing songs in the language

21% of students said this was what they liked most about the course, though the percentage was much higher for Technology.

Technology 41%, Maori 15%, Spanish 14%, Japanese 9%.

3. The ITV course as a fun and interesting way of learning: this was highlighted by 16% of students.

Spanish 24%, Technology 17%, Japanese 16%, Maori 13%.

4. Television as a learning medium was favoured by 14% of students

It offered watching and listening opportunities as a different way of learning from textbooks. This was an interesting medium: for example, the cultural videos showed students more about the places where the language is used.

Japanese 20%, Maori 13%, Technology 12%, Spanish 10%.

5. The presenting teacher, who was helpful, knowledgeable, and explained things in an understandable way, appealed to 7% of students, but particularly to students of Spanish.

Spanish 14%, Maori 7%, Japanese 6%, and Technology 5%.

6. The interaction between the student, the classroom teacher, the broadcast teacher, and students in other schools made the course interesting for around 6%, especially seeing other students' work and hearing the 'phone ins' to the broadcast teacher.

Japanese 7%, Maori 7%, Spanish 6%, Technology 5%.

Learning the topic

Most, 84%, of the students said the classroom teacher helped them learn the topic, while 67% said the TV presenter did. For 13%, the broadcast teacher did not help them learn the topic, and the classroom teacher did not help for 6%.

How the broadcast teacher helped the students learn the topic

Over half, 53%, considered that the presenter **explained the topic clearly** by showing and talking about the course and what had to be done to learn it. Helpful suggestions about word pronunciation, technology experiment guidance, and visual quick reference, as a core part of the presentation, were all appreciated by students.

A smaller number of students (7%) replied that the **revision of the topic**, including such methods as repeating words back upon instruction from the broadcast teacher, helped reinforce learning in the languages.

However, for 9%, the broadcast teacher **only helped them learn the topic sometimes**. These students emphasised that the broadcast teachers were unable to know if a particular student was keeping up or not. The course could be going too rapidly to 'keep up with', or too slowly for the level the student was at, leading to frustration and loss of interest. In both these situations, the broadcast teacher could not easily realise was happening.

A larger group of students—12%—felt that the **course was going too fast** making comprehension and retention difficult. For those who felt this way, the broadcast teacher was not helping to any great extent.

Finally, 12% of students were critical of the **presentation**, saying that the broadcast appeared unorganised, rushing through some material and taking too long on other items. Other criticisms were that the presentation should be more lively, and the presentation skills and experience of the broadcast teachers needed to be improved upon.

Table 6 outlines how students perceived the broadcast teacher's role, by course. The Spanish broadcast teacher was seen as the most helpful for explaining the topic (62% of students of Spanish) followed by Japanese (54%), Technology (52%), and Maori (49%). The Spanish teacher was also seen as the most helpful for revision of the course.

Of those students replying that the ITV broadcast teacher only occasionally helped their learning, this was least problematic for Spanish. The highest proportion of students who replied that the course was not clear, or too fast, were learning Japanese, then Maori, followed by Spanish and lastly Technology. For those students wanting a more dynamic presentation, this was most common with Maori, then Japanese, followed by Technology and lastly Spanish.

Table 6
The broadcast teacher

Student response	Japanese		Maori		Spanish		Technology	
	n	(%)	n	(%)	n	(%)	n	(%)
Explains topic	247	(54)	207	(49)	123	(62)	250	(52)
Revises topic	43	(10)	20	(5)	27	(15)	13	(3)
Helps sometimes	41	(9)	38	(9)	11	(6)	43	(9)
Difficult to comprehend	75	(16)	55	(13)	21	(11)	34	(7)
Improve presentation	31	(7)	66	(15)	15	(9)	69	(14)

How the classroom teacher helped the students learn the topic

The ways in which the classroom teacher helped the students began with the classroom teacher **revising and reinforcing the course material**: 44% of students replied that this was the case for them. It was done by, for example, going over audio tapes, worksheets, and experiments; discussing the broadcast lesson; enabling practice and practical activities; and having a recording of the video available for personal student revision.

The next most frequently mentioned contribution, by just over 26%, was that the classroom teacher **helped the student overcome difficulties** by explaining things that were unclear or difficult, such as pronunciations, meanings, the context of vocabulary, and technology construction ideas and methods.

A small group of students (5%) said that the classroom teacher **encouraged and facilitated extra activities** by providing ideas and opportunities to further the topic study beyond that offered in the ITV course. Extra activities included making up documents in the language, culinary explorations of the culture, events involving the language being spoken, perhaps to native speaking guests to the school, or expanding upon the existing activities in the technology projects.

There was a stated recognition by 5% of students that their classroom teacher was **already proficient in the ITV topic** (such as already being able to speak the language), and well able to fully explain the topic and provide extra information and activities. The reverse comment was made by 4%: their teachers were just beginning to learn the topic themselves and were not very far ahead of the students, if at all, in comprehension of the topic.

Table 7 describes the students' perceptions of the classroom teacher by course. The Spanish course respondents mentioned revision the most, followed by Japanese, Maori, and Technology. Technology had the highest percentage of students who thought the teacher was available to help them overcome difficulties, followed by Japanese, Maori, and Spanish. A higher percentage of Spanish students reported that their classroom teachers encouraged further learning through extra activities, followed by Maori, Technology, and Japanese. Students stating that their teacher was expert in the topic was most common for Maori, then Japanese, Spanish, and Technology. Students of Japanese were most likely to report that the teachers were just learning the topic themselves, followed by Spanish, Maori and Technology.

Table 7
The classroom teacher

Student response	Japanese		Maori		Spanish		Technology	
	n	(%)	n	(%)	n	(%)	n	(%)
Revise and reinforce	204	(45)	179	(43)	105	(53)	189	(40)
Overcome difficulties	121	(27)	114	(27)	45	(23)	132	(28)
Extra activities	15	(3)	25	(6)	16	(8)	24	(5)
Topic expert	23	(5)	41	(10)	7	(4)	12	(3)
Just learning	31	(7)	13	(3)	8	(4)	8	(2)

The use and value of the support material

The quality of the supporting material sent to participating schools won high regard from teachers. It included teaching goals, classroom objectives, guidelines for achieving the objectives, exercises for the students, and reference material essential to the course. In the language classes, audio tapes were supplied; for technology, there were supplies that would be used in the course, such as components for building mechanical alarms, and wool for felting activities.

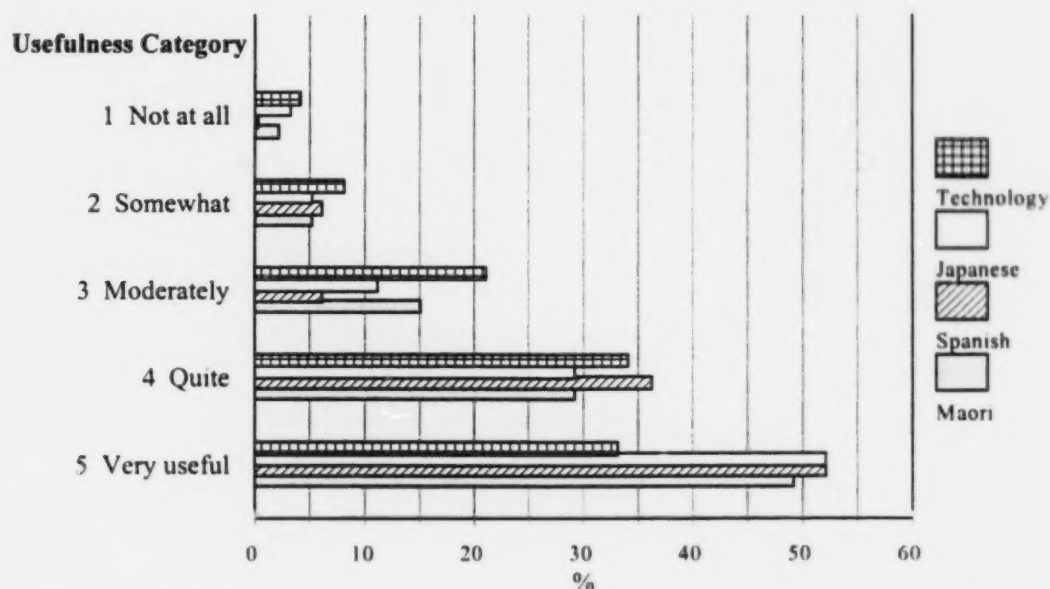
HOW USEFUL WAS THE SUPPORT MATERIAL FOR TEACHING?

Respondents used a scale ranging from 1 (Not at all useful) to 5 (Very useful) to answer this question. Results were as follows.

1. Not at all useful	3%
2. Somewhat useful	6%
3. Moderately useful	14%
4. Quite useful	31%
5. Very useful	45%

Figure 3 shows the differences between the courses. The highest percentage—though still very low—who thought the support material was not useful was in Technology (4%), followed by Japanese (3%), then Maori (2%). No respondents in the Spanish course chose this response. The 'very useful' response came from 52% of Japanese and Spanish teachers, 49% of Maori, and 33% of Technology.

Figure 3
Usefulness of the support material



What contributed most?

To establish in more detail what support material was of the most value, teachers were asked if there was any single part of the support material that they saw as contributing the most to their students learning the course. A majority (55%) said there was one part of the support material that did stand out; this figure fell to 48% for experienced teachers and rose to 61% for inexperienced teachers. About one in five, 22%, answered 'no' to this question: 30% of experienced teachers said this, but only 16% of inexperienced teachers.

The features of the support material reported to contribute the most were as follows:

1. Student worksheets, including activities and visual accompaniments such as wall charts: Maori 30%, Spanish 27%, Japanese 18%, Technology 15%.
2. Audio cassettes (language courses only): Spanish 34%, Maori 26%, Japanese 25%.
3. Teacher's pack, credited with keeping teachers well informed on course objectives, and enabling teachers to monitor their, and their classes', progress through the course: Spanish 12%, Technology 11%, Maori 8%, Japanese 5%.

Particular courses highlighted other aspects of the support material: 11% of Technology teachers rated the equipment supplied as a real expansion to the course, increasing the 'scope' the exercises could cover. Quite a high proportion of Japanese teachers (16%) emphasised the vocabulary and sentence structure sheets as a valuable resource. One other aspect of the course, the broadcast in the revision role of 'video on demand', was mentioned by 5%.

What was most useful during/between the broadcasts?

The items most frequently referred to as useful during the broadcasts were the student worksheets (22%), the teacher packs (16%), the vocabulary lists (15%) and other aspects of the course, such as the culture elements in the broadcast (12%). A little over one in ten of the respondents (12%) said they did not use the support material during the broadcasts. They considered this inappropriate, as the students should be more attuned to the broadcast than to other parts of the course, such as the worksheets, which they could use in the follow-up classes.

The most useful elements of the support material between the broadcasts, primarily in the follow-up lessons, included;

1. Student packs, with an emphasis on the worksheets: 25% overall, Spanish Maori 27%, Technology 22%, Japanese 21%.
2. Activities that reinforced learning by refreshing lesson content and stimulating interest: 21% overall, Japanese 29%, Maori 24%, Technology 15%, Spanish 10%.
3. Teachers of language classes considered the audio tapes extremely useful for reinforcing correct pronunciation and for listening activities: Spanish 49%, Maori 26%, Japanese 16%.

4. Teacher packs, with lesson plans, vocabulary and sentence structure for languages, and guidelines for approaches to projects for the technology course, were valuable for focussing ideas for teaching the course: 17% overall, Technology 33%, Spanish 24%, Japanese 19%, Maori 14%.

Did the teachers add any material?

Many teachers (56%) said they went beyond the support materials supplied with the course and added lesson material of their own. By course, this was reported by:

- Technology 60%
- Maori 57%
- Spanish 56%
- Japanese 52%.

According to their previous teaching of the topic, 62% of experienced teachers said that they added lesson material, compared to 54% of inexperienced teachers. Additions included:

1. Further activities to those in the packaged course material, such as extra language practice to increase use of vocabulary usage, for example 'vocabulary games and practice in real life situations'; in technology, relating the current aspect of the study to other scientific or social areas, allowing relationships and wider concepts to be realised as part of the learning.

Spanish 41%, Technology 33%, Maori 29%, Japanese 25%.

2. Supplementary material, such as further textbooks, video, extra visual material for wall charts, artwork, games, reference material, and a dictionary for the languages.

Technology 21%, Spanish 17%, Maori 15%, Japanese 11%.

3. Experience in teaching this topic area, bringing appropriate teaching skills, knowledge and strategies, so that the teacher's existing programme became a support for, or was supported by, the ITV programme.

Maori 19%, Technology 7%, Japanese 6%, Spanish 2%.

4. Testing to assess students' success with the course and to evaluate how they were doing: Japanese 10%, Spanish 5%, Technology 4%, Maori 2%.

Further use of the material

Teachers were asked if they had used or intended to use the support material in other classes. This was significant: if a teacher chose to include ITV course material in other or future programmes, this would confirm its value.

A little under half, 42%, of teachers replied that they had made further use of the support material beyond the ITV class, or that they intended to. Reuse figured more among experienced teachers, with 50% of them doing so; among teachers new to the topic, only 37% reported further use.

Among the courses, reuse was most frequent for Maori (51%) and Technology (48%), and lower for Japanese (32%) and Spanish (27%).

The forms that reuse took are summarised below, using teachers' own comments.

1. "There is planned reuse of the support material, such as using it in modules for this topic next year. It can be used to help develop our teaching of this area further."

Technology 26%, Maori 20%, Spanish 12%, Japanese 11%.

2. Using the support material for a different audience, such as another class, or cultural clubs, or making other teachers more familiar with the topic.

Maori 15%, Japanese 12%, Spanish 9%, Technology 7%.

3. There is a chance that some teachers will possibly reuse the support material, or rather parts of it, if they prove to be useful in teaching the ITV course, providing the course is offered in the school again.

Japanese 17%, Spanish 12%, Maori 8%, Technology 7%.

4. This will be a resource available for the future to assist in teaching the course.

Maori 6%, Spanish 5%, Technology 2%, Japanese 1%.

The issue of changes in the support material was also covered: 42% said they would like to see changes, while 36% did not want to see any. The rest were unsure or did not answer the question. Of the experienced teachers, 41% would like to see changes, compared to 45% of the inexperienced. By course, more Japanese teachers (48%) wanted changes, followed by Spanish (46%), Maori (40%) and Technology (36%).

The changes suggested include:

1. **Improving the written resources**, by making them suitable for a variety of student levels, and improving the presentation by adding colour, binding them, and increasing paper efficiency by printing on both sides of the paper.

Japanese 15%, Maori 15%, Spanish 10%, Technology 9%.

2. **More student material**, including more challenging vocabulary sheets, full instructions on class objectives for students so that they may direct their learning more personally, and references or further activities suggested to them.

Spanish 17%, Maori 15%, Japanese 10%, Technology 5%.

3. **More teacher information**, emphasizing clear instructions for student and teacher in the support materials, assessment options, a concise overview of the course, and references for further course material.

Technology 21%, Japanese 5%, Maori 3%, Spanish 2%.

- 4 **More revision material**, especially practising language by generating genuine interaction among students. This implies less new material.

Japanese 14%, Maori 4%, Spanish 2%, Technology 1%.

TEACHER PROFESSIONAL DEVELOPMENT

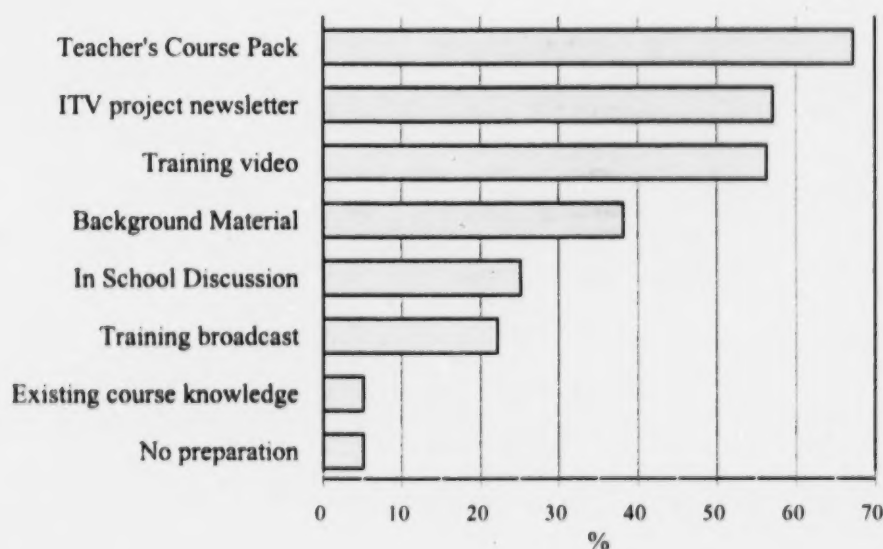
One of the goals for the ITV project was to contribute to the professional development of teachers. This was especially significant for the teachers taking part in language courses for the first time, as it required them to learn the language as well as to teach it.

Preparing for the ITV course

Teachers were supplied with various kinds of material, including a training broadcast, to familiarise them with the ITV project and the specific course before the broadcasts began.

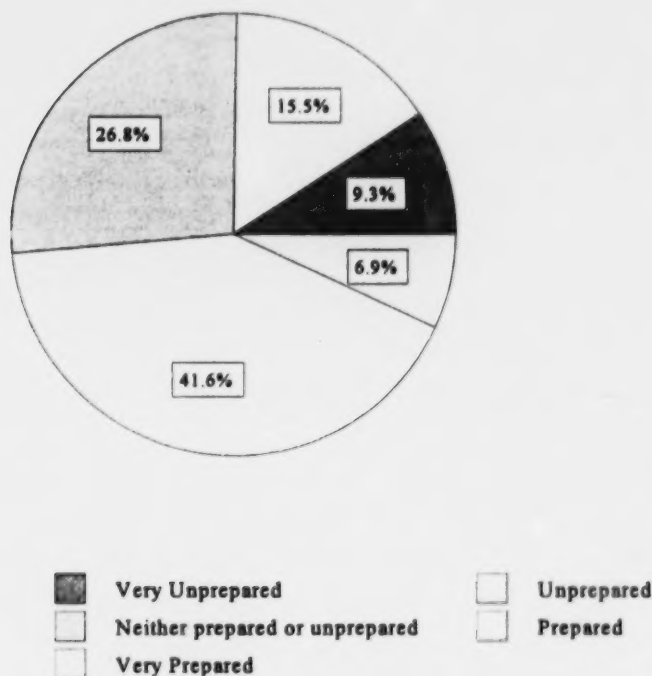
As Figure 4 shows, the element of the course highlighted by most teachers (67%), in connection with their training or preparation, was the teacher's pack of course materials sent out prior to the broadcasts. An ITV newsletter was introduced before the course began and continued throughout the course, with information about the broadcast teachers and organisational aspects; 57% of teachers said they referred to it as part of their preparation. Almost as many (56%) referred to the training video, and 38% referred to background material from the Correspondence School. A quarter of the teachers (25%) took part in in-school planning and discussions on how to implement the course, and nearly as many (22%) used the training broadcast. A small group, 5%, said they had previous knowledge about the course to rely on. However, 5% said they had no preparation before the course began.

Figure 4
Course preparation



The variation shown in preparation for the course, along with the differing experience in teaching these topics, resulted in teachers reporting a wide spread of preparedness. Figure 5 shows that just under half of the teachers (48.5%) felt they were either prepared (41.6%) or very prepared (6.9%) for the course they were about to teach. By contrast, nearly a quarter (24.8%) felt either unprepared (15.5%) or very unprepared (9.3%). More than a quarter (26.8%) said they were neither prepared nor unprepared for teaching the course.

Figure 5
Teacher preparedness



Each of the courses reflected different patterns of teacher preparedness, as shown below. In general, the Maori and Technology teachers felt the most prepared, the Japanese teachers least prepared, and the Spanish teachers in between.

Very unprepared: Technology 11.2%, Spanish 10.5%, Japanese 9.8%, Maori 6.1%.

Unprepared: Japanese 23.2%, Maori 14.6%, Technology 12.4%, Spanish 7.9%.

Neither prepared nor unprepared: Spanish 36.8%, Technology 25.8%, Japanese 25.6%, Maori 24.4%.

Prepared: Technology 46.1%, Maori 45.1%, Spanish 36.8%, Japanese 35.4%.

Very prepared: Maori 9.8%, Spanish 7.9%, Japanese 6.1%, Technology 4.5%.

Helping and hindering preparation

In response to the question on what helped teachers' preparation, the most common response (49%) was the way the course was provided. Several other helpful factors were mentioned, although each by fewer than 10% of respondents. Teachers' responses are summarised below.

1. Course provision: 49% overall; Spanish 68%, Technology 48%, Japanese 47%, Maori 43%.

The course material was delivered well in advance of the start date of the course and was well presented and easy to follow. The components of the teachers' packs, with student handouts, and the curriculum overview provided via the training tape and introductory broadcast, along with regular ITV newsletters, all guided teachers about how the course should be run.

2. Prior knowledge: 7% overall; Maori 12%, Japanese 6%, Spanish 5%, Technology 4%.

Prior knowledge of the topic, such as using the language in a country where it was the first language, or previous teaching experience in the topic, helped prepare for this course.

3. Interaction: 4% overall; Spanish 7%, Japanese 5%, Maori 4%, Technology 1%.

"Interaction with the presenter helped me become more aware of the programme objectives".

Finally, among the Japanese teachers, 5% stated that their positive attitude to the course helped their preparation.

Teachers were also asked about what had hindered their preparation, and thus their ability to teach the ITV courses. Their responses are summarised below.

1. Lack of knowledge of the topic: 22% overall; Spanish 21%, Maori 19%, Technology 18%, Japanese 17%.

A lack of knowledge about the subject area, such as the Japanese language, meant apprehension over the role of the teacher, and questions over what was involved in the course and how to run the follow-up lessons, extended to how to teach a topic such as a language. Accompanying this was the feeling that insufficient information about teaching the topic had been provided.

2. Insufficient time to allow for adequate preparation: 15% overall; Spanish 20%, Japanese 18%, Technology 13%, Maori 13%.

The commitments to other teaching, juggling around timetables, and then trying to keep up with the course, as some elements in the course should have more time allocated to teaching them, were all mentioned as reasons for there not being enough time to prepare for the course.

3. Technical problems: 5% overall; Japanese 8%, Maori 5%, Technology 2%, Spanish 2%.

Technical difficulties such as getting the satellite dish tuned in, and learning how to keep it in line with the satellite, were mentioned here.

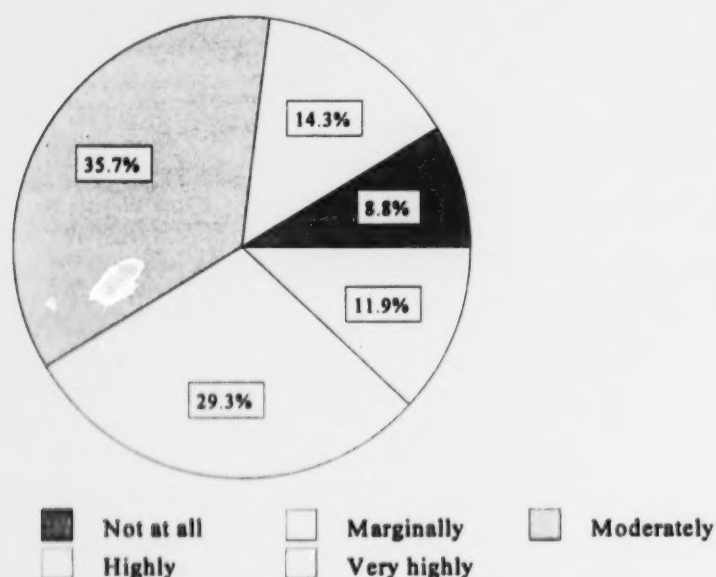
The Technology course had a unique difficulty associated with teacher preparation: the cost of materials and equipment necessary for full participation. This was mentioned by 15% of

Technology teachers. Primary schools in particular stated that they were unlikely to have the technical and scientific equipment and workrooms that intermediate and secondary schools have.

Gaining curriculum understanding

On the basis of existing experience, preparation for the ITV course, and the experience gained from teaching the course, the classroom teachers were asked to what extent the ITV programme had contributed to their understanding of the curriculum area taught. Figure 6 shows the responses for the five options available. Overall, only 8.8% replied that the ITV programme had not contributed to their understanding of the course, and 14.3% that it had contributed marginally. Over a third of all teachers, 35.7%, said that it had contributed moderately, and another 41.2% said that it had contributed either highly (29.3%), or very highly (11.9%) to their understanding of the curriculum area they taught in.

Figure 6
ITV contribution to curriculum understanding



There were marked variations among teachers in the four courses, as shown below. Teachers of Spanish and Technology were most likely to say that the courses contributed highly or very highly to their curriculum understanding.

Did not contribute at all: Maori 10.7%, Japanese 8.9%, Technology 7.9%, Spanish 7.9%.

Contributed marginally: Maori 19%, Japanese 14.5%, Technology 12.4%, Spanish 7.9%.

Contributed moderately: Japanese 38.6%, Maori 36.9%, Technology 34.8%, Spanish 28.9%.

Contributed highly: Spanish 36.8%, Technology 30.3%, Maori 28.6%, Japanese 25.3%.

Contributed very highly: Spanish 18.4%, Technology 14.6%, Japanese 13.3%, Maori 4.8%.

Technological skills

In a question related to learning the curriculum from the ITV programme, teachers were asked, 'Do you think that new technological skills are needed by teachers to participate in teaching with ITV?'. Responses were fairly evenly balanced: 42% said that no new skills were needed to participate, 15% were unsure, and 40% said some new skills were needed. The skill most often mentioned was basic knowledge of how to operate the equipment needed to receive broadcasts and communicate with the broadcast teacher. This includes television sets (especially tuning them in), video cassette recorders, SKY TV decoders, or satellite dish and decoder sets, and, ideally, video cameras to allow student visual feedback. What was emphasised most was the 'trouble shooting' role the teacher had to play if there was any difficulty in getting a signal for the broadcast.

A number of the technology course teachers (11%) stated that awareness of the project requirements was necessary, along with knowledge of how to work safely with the tools and materials included in the course, such as wood, metal, glass, and wool. Skills and knowledge about the operation, maintenance, and safety of the equipment were seen as essential; if they were not already known, they should be taught before the course started.

Assisting teacher preparation

Teachers were asked if there was anything that they would like to see as part of teacher preparation for the course. Over a third (36%) said that there were additions to the course they would like to see, 25% were unsure, and 27% said there was nothing extra needed. Fewer experienced teachers (29%) than inexperienced teachers (41%) thought there was a need for more preparation, and more experienced teachers (40%) than inexperienced (20%) said there was no need for more preparation.

The extra preparation suggested by teachers is summarised below.

1. More information on the course: 14% overall; Technology 21%, Spanish 20%, Maori 10%, Japanese 8%

Provision of appropriate resources and material for learning more about the topic, e.g. for languages, dictionaries and references; a comprehensive overview of the course, including the objectives and planning requirements; what if any support is needed, and what to expect during the year. This could be in a quick reference format for use throughout the teaching period.

2. A familiarisation event: 12% overall; Spanish 15%, Maori 14%, Japanese 13%, Technology 8%

A pre-course orientation, or an in-service training day that allows for a 'workshop' type preparation for the coming course; this would allow teachers to get together and discuss the course, and establish a 'local self-help' group to use as an initial approach to solving any problems that arise. During such an event, instructional techniques, use of the communications media, and the course content could all be addressed and prepared for.

3. The teacher learning the topic before the course starts: 9% overall; Spanish 12%, Japanese 11%, Technology 7%, Maori 6%

The teacher learning the topic, or part of it, before the course starts, would mean that some knowledge of teaching a second language, and knowledge of the material, would be confidently known before the course starts.

ITV's general contribution to teacher professional development

In the summary section of the questionnaire, teachers were asked a final question about ITV's contribution to teacher professional development. The following summary indicates their views.

1. ITV has an important role: 34% of teachers overall

ITV is a learning opportunity for teachers to gain new knowledge of the curriculum. It is formatted well to assist this learning with its audio-visual presentation.

I now have a basic understanding of Japanese, and with the resources feel competent to teach it again.

Certainly taught me what technology is all about.

Fostered an interest in the Maori language.

Opened my mind to Spanish.

Reinforced how to teach a second language to students, [including a] balance between vocabulary, sentence structure, drill, and activities.

It is positive when teachers learn alongside students.

I feel it has empowered me as a teacher and added another string to my bow.

By course, this category of response came from:

Spanish 39%, Technology 38%, Maori 31%, Japanese 29%.

2. Improvement of teaching strategies and methods: 6% overall

Excellent teaching strategies and methods were used in this course, and teachers said they can be used in the future.

Has increased my ability and awareness of being a support teacher rather than the main teacher.

It has shown me a lot of things in the way of achievement of objectives. Had a lot of carry over into other subjects.

By course: Technology 9%, Maori 6%, Japanese 5%, Spanish 2%.

3. Using the technology: 5% overall

Learning how to use the information and communication technology that is inherent in the ITV course is a contribution to teacher professional development in itself.

By course: Maori 6%, Spanish 6%, Japanese 5%, Technology 1%.

4. Unable to advance professional development: 5% overall

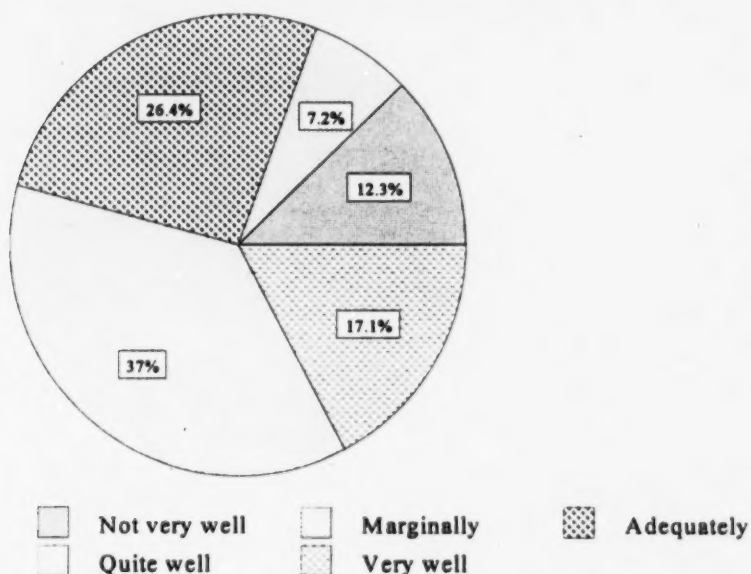
The course needs more before it can assist with professional development; there are important elements missing, such as 'in-service' training for the topics.

By course: Technology 5%, Maori 4%, Spanish 4%, Japanese 3%.

INTERACTION BETWEEN THE BROADCASTER AND RECEIVERS

The questionnaire asked how the broadcast lessons fitted into the classroom lessons of the course. Figure 7 shows that nearly 20% of respondents thought the classroom and broadcast lessons did not fit very well or fitted marginally, about a quarter (26.4%) considered the classes matched 'adequately', while over half (54.1%) replied that the two elements of the course fitted 'quite well' or 'very well'.

Figure 7
Broadcast lessons fit with the classroom lessons



By course, the variations were:

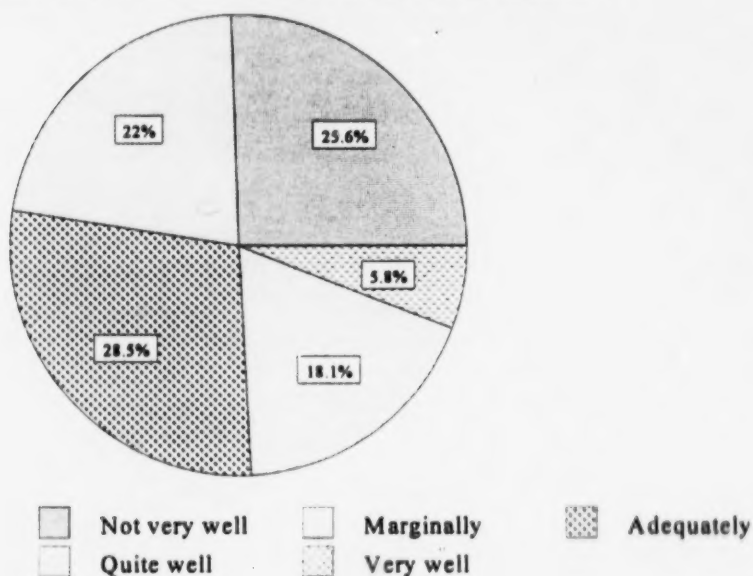
1. *Not very well*: Maori 17.3%, Japanese 15.5%, Technology 10.1%, Spanish 0.0%.
2. *Marginally*: Maori 11.1%, Technology 7.9 %, Japanese 6.0%, Spanish 0.0%.
3. *Adequately*: Japanese 29.8%, Maori 25.9%, Technology 25.8%, Spanish 21.1%.
4. *Quite well*: Spanish 39.5%, Maori 38.3%, Technology 38.2%, Japanese 15.5%.
5. *Very well*: Spanish 39.5%, Technology 18.0%, Japanese 15.5%, Maori 7.4%.

This indicates that the Spanish class achieved the best match between what was included in the broadcast lesson and how it related to the classroom lesson.

The communications media

To begin to examine interaction in the ITV courses' interaction, teachers were asked how well the communications media of TV, phone, and fax worked together. They were also asked to rate their experience with those media. Figure 8 shows that opinions were divided on how well the technical infrastructure set up for communications actually enabled communication, but negative views predominated. Over a quarter of teachers (25.6%) gave a rating of "not very well" to how the communications media worked together, 22% said they were 'marginal', and 28.5% said they were 'adequate'. On the positive side, 18.1% said the communications worked 'quite well', and only 5.8% said they worked 'very well'.

Figure 8
How well the communications media worked together



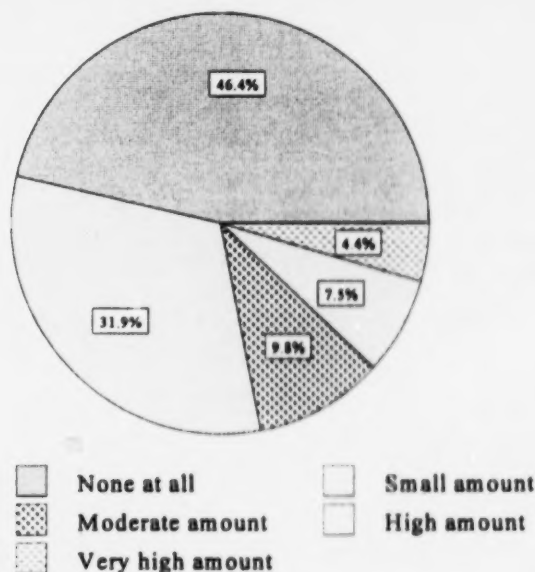
By course, the results were as follows:

1. *Not very well*: Japanese 28.6%, Technology 27.6%, Maori 25.7%, Spanish 15.4%.
2. *Marginally*: Technology 27.6%, Maori 24.3%, Japanese 20.8%, Spanish 7.7%.
3. *Adequately*: Spanish 38.5%, Maori 33.8%, Japanese 24.7%, Technology 23.0%.
4. *Quite well*: Japanese 23.4%, Spanish 23.1%, Technology 17.2%, Maori 10.8%.
5. *Very well*: Spanish 15.4%, Maori 5.4%, Technology 4.6%, Japanese 2.6%.

Communication between classroom teachers and broadcast teachers

Having established how well the communications structure was working, classroom teachers were then asked 'was there any communication between you and the broadcast teacher during the course?' Figure 9 shows that while the structure of the communications system may have had some difficulties, this alone does not account for the high percentage of teachers who did not communicate with the broadcast teacher during the course. Nearly half the classroom teachers (46.4%) said that there was no communication between them and the broadcast teacher, and close to a third (31.9%) said that there was only a 'small amount'; 9.8% said there was a moderate amount, 7.5% a high amount, and 4.4% a very high amount.

Figure 9
Communication between the classroom and broadcast teacher



Communication between classroom teachers and broadcast teachers varied considerably by course:

1. *None at all*: Maori 65.9%, Japanese 56.0%, Technology 34.4%, Spanish 12.8%.
2. *Small amount*: Technology 46.7%, Japanese 29.8%, Maori 24.4%, Spanish 17.9%.
3. *Moderate amount*: Spanish 25.6%, Technology 8.9%, Japanese 7.1%, Maori 6.1%.
4. *High amount*: Spanish 20.5%, Technology 7.8%, Japanese 6.0%, Maori 2.4%.
5. *Very high amount*: Spanish 23.1%, Technology 2.2%, Japanese 1.2%, Maori 1.2%.

There was much more communication in the Spanish course than in other courses. This can be at least partly explained by the fact that the Spanish broadcast teacher initiated contact with the classroom teachers to discuss the course, while the other broadcast teachers did not. The proactive

approach to broadcast and classroom teacher interaction in this case was assisted by the number of schools involved: only 25 schools ran Spanish courses, compared with 60 for Maori, 60 for Japanese, and 80 for Technology. The smaller number for Spanish meant fewer phone calls or faxes to teachers were necessary to maintain contact. Additionally, the technology broadcast teachers took a 'modular' approach to the course, so that every 4 weeks or so a new broadcast teacher appeared. This worked against establishing communication links based on building up contact, trust, and the knowledge that the broadcast teacher was willing and able to help the classroom teacher on any ITV course issue.

Nevertheless, the work that the Spanish teacher put into regular communication with the classroom teachers doubtless contributed to the positive results showing up for the Spanish ITV course. Moreover, a higher percentage of Spanish classroom teachers reported that there was something useful to their teaching in that interaction with the broadcast teacher.

The usefulness of the interaction for teaching and learning

By course, the percentages saying there was a useful aspect to the interaction were Spanish 56%, Technology 18%, Maori 18%, and Japanese 11%. Overall, however, only 21% of teachers thought that this was the case, whereas 47% thought there was nothing useful, and 20% were unsure.

The 21% who did think there was something useful for teaching purposes commented on what this consisted of, as follows:

1. Good support for the course: Overall 12% (of the 21%)

By course: Spanish 41%, Technology 9%, Japanese 8%, Maori 5%.

Help offered included positive role modelling of how to teach the course from the presenter; assistance from the broadcast teacher helped increase the confidence to teach the course with the class, provided useful teaching techniques and resources, and provided positive feedback on the students' efforts; the broadcast teacher was responsive to requests for modifying pace and content to meet the course needs better.

2. Clarification of teaching points: Overall 8%

By course: Spanish 34%, Maori 7%, Technology 3%, Japanese 1%.

The broadcast teacher provided feedback on students' questions and clarification of issues arising in the course, such as pronunciation in the languages and ideas for the technology programme.

3. Motivation: Overall 6%

By course: Spanish 12%, Technology 7%, Maori 3%, Japanese 3%.

By showing an interest in the students, the broadcast teacher encouraged both the teacher and the students in the course, and produced a 'wider classroom' effect, as seeing other students' work also contributed to increasing the enthusiasm of the students.

Barriers to the interaction

To explain why the interaction was not successful, the teachers were asked if there was anything that hindered communication between the classroom teacher, the students in the class, and the broadcast teacher.

A large number of teachers (37%) considered that there were problems which hindered communication. A slightly larger number (41%) replied that there was nothing hindering communication, it was just a case of not choosing to communicate, while 12% remained unsure about this question. Again, there was marked variation between the courses: 50% of teachers in the Maori course said there were barriers, 39% in the Technology course, 32% in the Japanese course and 17% in the Spanish course. Conversely, 71% of teachers in Spanish, 40% in Japanese, 36% in Technology and 32% in Maori said there were no barriers to communication.

The factors seen as interfering with the interaction between the broadcast teacher and the receiving classroom are summarised below.

1. No easy access to the communication tools: Overall 15%

Either through no classroom access to the phone or fax, or by not being able to watch the programme live due to timetabling difficulties, there is actually little opportunity for communications as there are not the interaction possibilities of the live broadcast, nor the technical means, i.e. the phone and fax, to enable interaction.

By course: Maori 19%, Technology 17%, Japanese 14%, Spanish 9%.

2. Factors in the course hindered communication: Overall 9%

The presentation of the material had some problems, such as visual or audio components being unclear, that is, hard to hear and see. There was also a feeling that the interaction was 'forced' and without much meaning; this caused students and teachers to become uninterested in pursuing interaction with the broadcast teacher. The speed of the course was too fast to keep up with, and therefore discouraged students pursuing direct communication with the broadcast teacher, or it was too slow, and caused students to lose interest in the course. Interaction was further hindered by busy telephone lines, making getting through difficult, a misunderstanding about who could phone in, i.e. whether you had to be invited or could just go ahead and telephone the broadcast teacher, and a lack of responsiveness on the part of the broadcast teacher to recommendations from classroom teachers on how to improve the course while it was underway.

By course: Technology 10%, Japanese 9%, Maori 8%, Spanish 0%.

3. Technical difficulties: Overall 6%

Poor telephone connection between the Correspondence School and the calling school, such as static or unclear lines, were a hindrance. Difficulties with the TV and VCR also occurred occasionally, requiring repairs that made the machinery unavailable for a time.

By course: Technology 9%, Japanese 6%, Maori 5%, Spanish 0%.

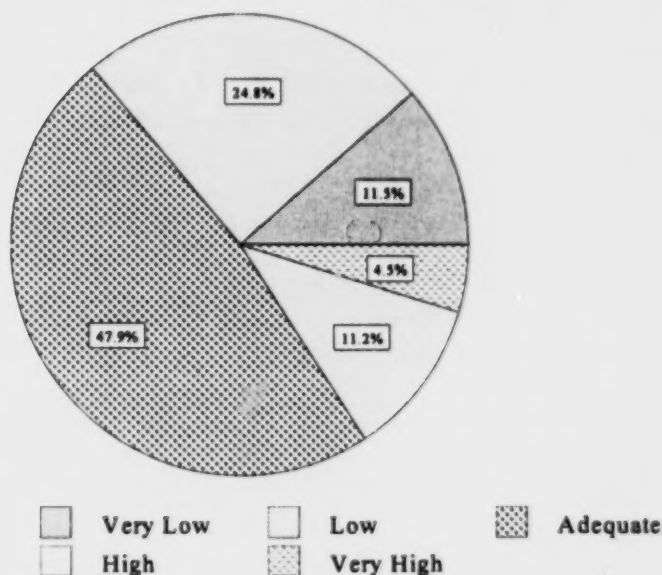
A related point was that 4% of respondents replied that they were unable to receive a Sky TV signal: the school they were teaching in proved to be just out of the Sky reception area. During the

field visits, several schools pointed out that the top of a nearby hill might have reception, but the school site did not. The cost of setting up cabling to a reception point was beyond the project and school budgets. In such instances, either the Correspondence School or a teacher or parent with Sky TV supplied video tapes of the course. This greatly reduced interactivity opportunities for the school. If a tape was not sent, or the person taping the programme missed taping any lesson, the continuation of the whole course was thrown into question.

Students' engagement with the broadcast teacher

Classroom teachers were asked how they would rate their students' engagement with the broadcast teacher for learning purposes. Figure 10 shows that 36.3% of teachers rated students' engagement as low or very low, 47.9% as adequate, and 15.6% as high or very high.

Figure 10
Students' engagement with the broadcast teacher



The variation by course was:

1. *Very low*: Technology 18.2%, Maori 12.8%, Japanese 7.4%, Spanish 2.6%.
2. *Low*: Technology 30.7%, Japanese 28.4%, Maori 26.9%, Spanish 0%.
3. *Adequate*: Maori 57.7%, Spanish 51.3%, Japanese 48.1%, Technology 37.5%.
4. *High*: Spanish 30.8%, Technology 12.5%, Japanese 11.1%, Maori 0%.
5. *Very high*: Spanish 15.4%, Japanese 4.9%, Maori 2.6%, Technology 1.1%.

It can be seen again that the high interaction factors mentioned above have an impact here: the students in the 'proactive' environment of the Spanish course were seen as having a stronger link with the broadcast teacher, assisting student learning.

The value of the interaction for student learning

Teachers were asked if there were valuable learning aspects to the interaction, and also if there were least valuable aspects (and if so, what they were). A total of 41% said that there were valuable aspects. By course, results were Spanish 71%, Japanese 38%, Maori 38%, and Technology 34%. Over a third, 34%, of teachers said there were 'least' valuable aspects to the interaction between their students and the broadcast teacher. Another 29% were unsure. This was influenced by factors such as the class watching by video, thus barring students from the most immediate possibility of communicating; so judging the effectiveness of the interaction became impractical for teachers.

The explanations for the responses regarding the value of student and broadcast teacher interaction are summarised below.

1. Valuable interaction: Overall 24%; Spanish 49%, Japanese 22%, Maori 21%, Technology 17%

There was value in the interaction, with students seeing other students' work and thus being able to compare their work; seeing their work presented on TV was also reported as a boost to the students' sense of achievement. The feedback by the broadcast teacher was a motivator for the students.

2. Rapport: Overall 10%; Spanish 37%, Japanese 9%, Maori 6%, Technology 2%

A rapport was built up between the students and the broadcast teacher through a motivating personality on screen, and constant and positive feedback. The interaction was such that it *encouraged* students to participate in the course and continue the interaction. This was reflected in all the work in the course, with a greater effort put in to match the positive feedback the student had come to expect.

3. Some valuable interaction: Overall 9%; Technology 11%, Maori 9%, Japanese 9%, Spanish 4%

The interaction was felt to be of value only when the students saw themselves or their own work on TV, or when an element of the course was of particular interest to them, for example, the cultural material in the language courses, or during the few times they communicated with the broadcast teacher by phone or fax.

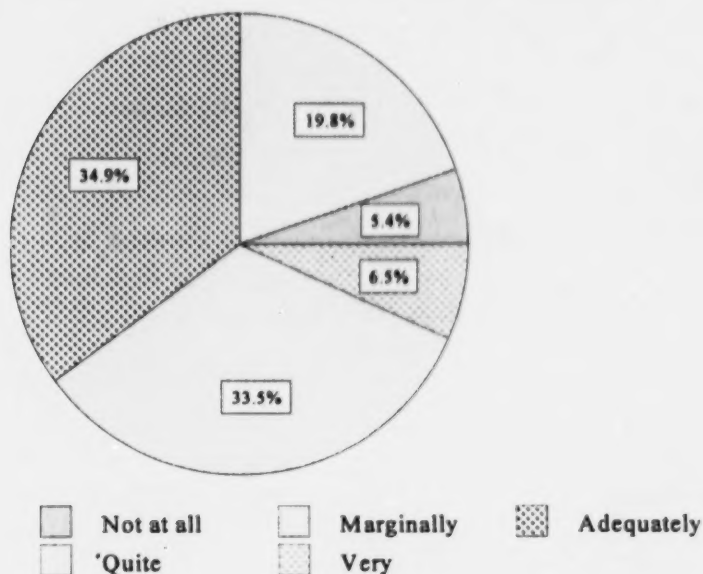
4. Poor interaction: Overall 11%; Technology 15%, Maori 13%, Japanese 11%, Spanish 5%

There was nothing valuable within the interaction during the course; the impression was that it was contrived, superficial, and rushed, with an extremely short amount of time available for the weekly phone in's, and lacking authentic spontaneity. The student phones in's were sometimes inaudible and some students were reported to 'turn off' during this phase of the interaction. Other factors seen as contributing to poor interaction were the students being unwilling even to attempt it, due to shyness and feeling uncomfortable about talking to the broadcast teacher over the 'open' phone lines.

Overall effectiveness of the interaction

The teachers were asked how effective a teaching environment was created between the broadcast teacher, the classroom teacher, and the classroom students. Figure 11 shows that 5.4% of teachers thought that the ITV course was not at all effective, 19.8% thought it marginally effective, 34.9% stated it was adequately effective, 33.5% considered it to be quite effective and 6.5% replied that it was very effective. But again, the analysis by course shows that teachers of Spanish were markedly more likely to rate the environment as quite effective (44.7%) or highly effective (13.2%).

Figure 11
The effectiveness of the interactive teaching environment



The explanations given by various course respondents as to why they rated the interaction as they did are summarised below.

1. Not at all effective: Overall 5.4%; Technology 8.4%, Maori 5.3%, Japanese 3.7%, Spanish 2.6%

This was not an effective way to teach the course, it would have been better to have a qualified teacher in the classroom to teach the course.

2. Marginally effective: Overall 19.8%; Maori 26.3%, Technology 21.7%, Japanese 17.3%, Spanish 7.9%

The effectiveness was compromised by such factors as the classroom teacher's lack of knowledge, the course not being at the level of that particular class in terms of comprehension, and it being either too fast or too slow.

3. Adequately effective: Overall 34%; Maori 39.5%, Japanese 35.8%, Spanish 31.6%, Technology 31.3%

The effectiveness of the course rose as familiarity and confidence with learning in this way increased; yet the stated 'sameness' of the course did at the same time turn some students off this method of study. The time pressures of trying to keep up introduced further doubt about teachers always being able to keep up with teaching the course material, working as some were from about the same knowledge level as the students, along with the fact that some students seemed able to adapt better than others to the medium and the topic, and some students did not react well to the TV presentation at all.

4. Quite effective: Overall 33.5%; Spanish 44.7%, Japanese 34%, Technology 32.5%, Maori 27.6%

It was quite effective due to the variety of media involved, getting students interested at a variety of levels. The interaction and the feedback from the broadcast teacher was sufficient to be of value in increasing the students' and the teachers' confidence and motivation for the course.

5. Very effective: Overall 6.5%; Spanish 13.2%, Japanese 8.6%, Technology 6.0%, Maori 1.3%

The teaching environment of the broadcast and follow up classroom lesson worked very well together; the environment was a highly motivating one, with 'high interest being shown by students for setting and achieving worthwhile educational goals'. The whole course, from the resource to an 'entertaining and interesting' broadcast teacher, presented an opportunity for that school and class to do that course. It was a successful way of teaching a subject when the classroom teacher did not know anything about the course.

Suggested improvements

When the teachers were asked if they had any suggestions for improving the interactivity, 41% did, 39% did not, and 12% were unsure. There were four suggestions on how the interaction could be improved, as described below.

1. More structure to the interaction: 16%

Build more structure into the interaction by ensuring the 'live to air' conversations are well directed in their purpose. Make time available on a regular basis for classroom teachers to talk to the broadcast teachers. Ensure that students are well prepared when they participate in the interaction: for example, a practice phone-in session could be undertaken by students to ease them into what is a new and possibly anxious way of communication for learning.

2. Make the interaction livelier: 10%

Improve the liveliness of the presentation to make it appeal more to the students. Only when the teacher can relate well to kids via this TV medium will the broadcast teacher really capture the students' attention. A live audience could help get the timing right and encourage a livelier presentation.

3. More direct communication: 9%

Have a greater number of schools visit the broadcast teacher, have more classroom broadcasts in the course, have the course teachers meet in regional groupings to discuss the course, and structure in more feedback on both sides. There could be tutors available after the broadcast to answer questions raised from the broadcast and the course in general.

4. More choice and variety in the course: 9%

Include a more flexible broadcast or viewing schedule, and time for contacting the broadcast teacher. Include a variety of communication media, such as phone, fax, letter, e-mail, and increase the visual nature of the material: for example, cartoons instead of static drawings would add variety in the presentation. Offer variety in levels, and make clear what is core to the course and what may be optional, to give the classroom teacher some control over what will be taught at what pace.

Live to air broadcasting

Related to interactivity is the issue of the broadcasts being 'live'. When teachers were asked, 'Do you think the live to air nature of the ITV broadcast lesson is essential to the course?' 51% said no, 29% said yes, and 15% were unsure. The response is indicative of the difficulties experienced over the interaction process, and the low take-up of the interaction options.

Additionally, there are advantages with a video tape of the programme, beginning with control over the rate at which information is taken from it and the ability to review the material easily. An added advantage is that the teacher is able to preview the course, and so know what to expect and plan for in the classroom.

Reasons for wanting the course to be live included: the live to air nature of the course allowing for interaction; the live element increasing attention because the students realised they could not rewind the video if they missed something (unless of course the broadcast was being video recorded); the live to air nature adding some spontaneity to the broadcast, with a feeling of 'you never know what might happen'; and the students getting the feeling of being in a 'wider classroom', with many schools and classes joining in the course at the same moment. The interaction of the feedback was useful and encouraging; hearing of the work of others, and seeing others' work, made real for the viewing students that others can approach things differently; consequently the students get a wider view of the topic. A few teachers mentioned that the regular weekly schedule actually acted as a prompter to stay on the schedule and keep up with the course, not allowing them the opportunity to 'leave it for this week', as they could have with a video version.

Reasons for *not* having the broadcasts live began with the perception that the interaction was not really worthwhile, being in fact at a minimum level, and with not enough time available during a broadcast to attempt it properly. Time to fit the broadcast into a busy school timetable was also not always available, especially when a broadcast day was interrupted by a sports event, cultural activity, or school trip. Alternatively, a six day timetable, or 'block' approach to courses, made a weekly schedule inappropriate.

Along with altering the methods of interaction, the control offered by video over live broadcast was a dominant factor in the decisions made about how teachers would like to be involved in ITV

classes in the future.

The pace of the ITV courses

An important factor in the live broadcast schedule was that if the pace got too fast for any participant, then at every new broadcast they would fall further behind. This was compounded in the language courses, where knowledge and understanding of the course had to build upon itself. A question was put to teachers and students about the pacing of the course, with the following responses.

1. *The course was much too slow:*

Teachers 3%; Maori 6.9%, Technology 3.5%, Japanese 0%, Spanish 0%.

Students 4.5%; Technology 6.6%, Maori 6.4%, Japanese 1.8%, Spanish 1.6%.

2. *The course was too slow:*

Teachers 14%; Technology 20%, Japanese 13.3%, Maori 11.1%, Spanish 6.1%.

Students 8.8%; Maori 12.7%, Technology 9.1%, Spanish 7.9%, Japanese 5.3%.

3. *The course was about right:*

Teachers 49.4%; Spanish 78.8%, Technology 54.1%, Maori 43.1%, Japanese 37%.

Students 51%; Technology 57.1%, Spanish 55.3%, Japanese 49.0%, Maori 44.6%.

4. *The course was too fast:*

Teachers 24.2%; Japanese 34.7%, Maori 23.6%, Technology 18.8%, Spanish 15.2%.

Students 29%; Japanese 34.3, Spanish 31.6%, Maori 28.9%, Technology 22.8%.

5. *The course was much too fast:*

Teachers 9.4%; Maori 15.3%, Japanese 14.7%, Technology 3.5%, Spanish 0%.

Students 6.7%; Japanese 9.6%, Maori 7.4%, Technology 4.4%, Spanish 3.7%.

The Spanish broadcast teacher reported in his interview that it became apparent from early classroom teacher feedback that the course was beginning to go too fast. This broadcast teacher then modified the pace of the course. This is likely to be the main reason that the Spanish course was viewed as the most suitably paced course.

In terms of what made the course too fast, points raised included the need for more time to consolidate what had been learned in the languages, so as to enable continuation with the course at a comprehensible level, and the simple need for revision in language learning. For the technology course, it was a lack of time to do the experiment and project work before the next module was scheduled.

Perceptions of the course being too slow arose from a feeling that there was too much repetition and the course was not up to particular students' level, or keeping the students' interest. The teachers who responded that the course was the right speed also said that one or two broadcasts may

have covered too much; however, the balance of what was delivered was at a suitable pace. An extension of this was the perception that the pace of the course varied from a fast section to a slow section, and this made for an uneven delivery speed.

A final comment made about pace was that the classroom teacher had little control over the pace at which the course came into the class. This was exaggerated when the school situation itself was not compatible with the scheduled broadcast pacing, or when the other things happening in schools took time away from the scheduled half hour of the broadcast. The timetable situation, and the benefits of having the broadcast on a more controllable video format, were some of the factors prompting a high proportion of teachers to video the broadcasts.

Adapting the broadcast timetable – video recording the broadcast

The majority—82%—of classroom teachers recorded the broadcasts on video. The large number of teachers who recorded the broadcasts gave the following reasons for doing so.

1. Planned rewatching of the lesson, for revision of the material, and clarification by viewing the lesson a second time: 46%.
2. If live viewing is to be missed by the class or an individual student for any reason, the broadcast is copied as a 'catch up' facility: 20%.
3. Viewed the lessons only on video, due to timetable clashes with the broadcasts or no access to the reception equipment, for example when there were two classes taking the course and only one could see the broadcast live: 16%.
4. So that other classes could concurrently participate in the course; this might include classes inside or outside the school, for example adult learners for the languages, or other teachers: 13%.
5. As a resource that may be used at a later date as part of the teaching of this topic: 11%.
6. In the event that the class is to be repeated at a later date in this school, the videos enable the whole course to be available for reuse: 5%.
7. Lack of Sky TV reception in our school made it necessary to record: 3%.

Other reasons mentioned were to keep a record of what had happened in the course, and recording only those lessons which involved interaction by students in that class. It is clear that the video as a resource is a prime reason for recording the broadcast, followed by it being an enabler to continue with the course should the broadcast schedule be missed.

Some conclusions on interaction

Conclusions about the interaction include the fact that most of the students did not have direct contact with the broadcast teacher, the classroom teacher, too, had a reasonably low level of contact, and the 'live to air' aspect of the course did cause timetable problems, with a slight majority of teachers not considering it to be essential. The pace of the course also came in for some criticism, especially when classroom teachers felt their suggestions were not taken note of to correct this stated problem. It is also clear that the broadcast teacher who was the most proactive in communicating with classroom teachers was considered to have the most effective interactive teaching environment.

THE TECHNOLOGY

Installation

The ITV trial involved broadcast and reception technology which was new to many participants, if not in terms of using items such as the TV, then in how the broadcast came into the school and was used.

Over half (52%) of teachers reported that they had no problems with the technology involved, 41% reported having some difficulty, and 1% said they were unsure whether there had been any problems.

Regarding setting up the equipment, 7% of teachers said there were problems getting the equipment. Damage to the first shipment of satellite dishes contributed to this. The same percentage reported difficulties in getting the equipment installed, and 26% said there were some difficulties to overcome in ensuring the equipment worked properly. A point made in interviews was that teachers had to become familiar with ensuring the satellite dish reception was of the required standard, and if not, with how to adjust it. Also required was a working knowledge of how to link the broadcast reception machine, TV and VCR, so that all worked together with the broadcast signal for viewing and recording.

A number of teachers did have difficulty with specific items of communication equipment. These are shown below, with the percentage of teachers for whom each was a problem.

Satellite dish reception: 14%

(21% of schools used satellite reception of the broadcast).

Satellite decoder: 13%

Telephone: 13%

Video cassette recorder: 9%

Television set: 8%

Cables connecting all the machines together: 8%

Sky television decoder: 7%

Fax machine: 4%

Explanations given by teachers for the difficulties included: being unfamiliar with the technology, as an initial hindrance to the course (4%); availability of all the machinery was problematic, for example sharing the TV set around the school meant an administrative task to ensure the TV was available for weekly class use; no phone was available for the broadcast classroom (6%); there were early problems getting the machinery setup, however, once that was achieved, the problems were solved (10%).

Use of the telephone posed some operating problems during the course, including the inevitable and frustrating 'busy' signal when too many calls were placed for the lines available, or static on the phone line making hearing very difficult (4%).

The signal reception also gave some difficulties, with 7% reporting there were some problems with satellite dish reception which required regular tuning of the dish. Sky TV reception was a problem for a small number of participants, with 2% saying reception quality was not good, and a

further 2% saying they could not in fact receive any ITV broadcast signal.

When asked if there were any changes made to the teaching room to accommodate the ITV course, 43% of teachers said they made no changes to the classroom layout or location, whereas 53% did make changes. Of those changes, the most common was the use of another room to the one normally taught in: 29% of teachers replied that they moved their class to a room more suited to a teaching method such as ITV, equipped with audio visual equipment. Such venues included audio visual theatres, a customised section of the library which included tiered seating and the TV and VCR, and multimedia rooms built for teaching via methods such as ITV.

The alternative to not moving to another location, or not changing anything at all to run the ITV course, was to modify the normal teaching room so as to accommodate the ITV lessons. Over one in five (21%) of teachers reported that they did in fact make changes to their room. This ranged from such minor changes as altering desk placement to allow for class viewing, to bringing in curtains to allow for better television viewing, to installing a phone to allow for the 'phone ins'.

Support and maintenance

An important element in using the technology of the course was whether the teachers felt they had reliable support to maintain the equipment in operating order. The replies show that good support was generally in place, with 70% of teachers saying that they felt they had the support necessary to maintain the equipment; but 18% were unsure, and 4% said they did not have any support. The schools which had satellite dishes installed praised ROCK Communications for its quick and effective response to any problems with the satellites. In many schools, local technicians were available to help if the school did not have anyone on staff to assist.

Reception quality

Overall there was an acceptable reception quality for the ITV broadcasts. The respondents' views of the quality of reception were:

Very low 1.0%
Low 2.1%
Medium 22.4%
High 41.4%
Very high 33.1%.

Teachers gave a similarly positive response in terms of their confidence about the technology used in the ITV project, with over 65% rating it high or very high. Overall they rated their confidence with the technology as:

Very low 0.7%
Low 5.9%
Medium 27.9%
High 47.0%
Very high 18.5%.

To summarise how the technology fitted into the ITV course, the respondents said that if the technology is set up well for teaching and learning purposes, is properly used by students and teachers, and the facilities are affordable by the school, then the technology used in the ITV programme does integrate well for classroom use. It is when the technology poses difficulties, such as a phone not being available for use, or the phone line suffering from static and interference, that the technologies do not integrate well into the course and create an unfavourable effect on interaction and participation in the course.

Conclusions from the questionnaires

Finally, teachers were asked about their overall impressions of the ITV project. Close to half (44%) replied that it was a valuable and worthwhile endeavour fitting the school's need for such a course, as it included native speakers for language courses who brought an accurate and more expansive course into the school than was previously available. The TV medium also offered variety and proved to be motivating for students.

However, a substantial group of teachers (26%) stated that improvements were needed, including:

1. Better use of the TV audio visual medium, by improving and diversifying the method of presentation
2. Choosing a more effective model for interaction that allows or easier interaction by a greater number of students, with increased value in that communication. The model for interaction should be reliable, and overcome the restricted opportunities for interaction available in the two-minute phone call.
3. A more flexible approach to time, including scheduling the course into a school so that problems of pace and timetabling can be addressed.
4. Allowing for variations in the learning levels of the students.

DIFFERENCES IN THE EXPERIENCES OF PARTICIPATING SCHOOLS BY AREA AND TYPE

Rural/urban differences

The Ministry of Education selected a mix of types of school area to participate in the ITV programme. Schools fell into four categories of main urban (30,000 or more people), secondary urban (10,000 to 29,999), minor urban (1,000 to 9,999), and rural (up to 999).

Looking first at the important differences between the teachers' replies by area types, only 24% of rural teachers had previously taught the ITV course topic, compared to 28% of secondary urban, 39% of main urban, and 45% of minor urban teachers.

Table 8 shows the number of teachers providing each course by area. The Technology course was slightly more common in urban areas, while the language courses were fairly evenly split among all areas.

Table 8
ITV course teachers' replies by area

	Main Urban n (%)	Secondary Urban n (%)	Minor Urban n (%)	Rural n (%)
Maori	29 (27)	8 (32)	25 (31)	24 (26)
Spanish	14 (13)	3 (12)	7 (9)	16 (18)
Japanese	26 (24)	5 (20)	27 (34)	29 (32)
Technology	40 (36)	9 (36)	21 (26)	22 (24)
Total	109 (100)	25 (100)	80 (100)	91 (103)

Teachers in rural schools were more likely to be taking 2 or more classes, with 27% doing so, compared to 15% in minor urban, 12% in secondary urban, and 9% in main urban. A difference among the areas was also evident in the level of students being taught, with 22% of rural schools teaching the course to students under Form 1 (Year 7), compared to 15% of minor urban and 13% of main urban.

A slightly smaller percentage of rural teachers (79%) thought there were advantages in the ITV programme, compared to teachers in the urban areas (main urban 86%, minor urban 84%, and secondary urban 80%). Discussing particular advantages, a higher proportion of rural teachers replied that the ITV project was the way to provide the course (44%), compared to main urban 22%, secondary urban 24%, and minor urban 30%. Conversely, rural school teachers were the least likely to reply that the course would have occurred in their school without the ITV course (rural 19%, main urban 32%, secondary urban 40%, minor urban 44%).

Close to half the rural teachers (48%) thought that new technological skills, including the knowledge to operate and fix minor problems with the machinery involved, were needed by teachers to participate in teaching with ITV, compared with minor urban 41%, secondary urban 32%, main urban 32%.

The principal difference to emerge regarding the support material was that the rural teachers thought the language vocabulary lists were the most important aspect of the support material for them during the course: 24% said this, compared to 15% of minor urban, 9% of main urban, and 8% of secondary urban. This perhaps indicates a greater difficulty in getting a variety of language teaching materials in rural areas.

Another area of difference occurred in the number of teachers who thought that the 'live to air' aspect of the course was essential. Among rural teachers, the live to air aspect was considered essential by only 17%, compared to minor urban 33%, main urban 33%, and secondary urban 40%.

In relation to making changes to the classroom layout to prepare for the ITV course, the rural teachers did this least (35%), compared to 56% of secondary urban, 59% of main urban and 63% of minor urban teachers. Rural teachers were also far less likely to shift their class to another room: only 4% did this, compared to a range of 26% to 34% for the urban schools. Another interesting difference was that teachers from the main urban schools were *least* likely (58%) to say they felt they had reliable support for maintaining the equipment, compared to 71% of rural teachers, 72% of secondary urban teachers, and 75% of minor urban teachers.

Differences by school type

The range of levels of students involved in the course is reflected in the variety and numbers of school types that returned the teacher and student questionnaires. Table 9 shows the teachers' replies by course and school type. The most significant differences are summarised below.

Table 9
ITV course teachers' replies by School Type

Area (composite) n (%)		Primary				Secondary				Special School			
		Contributing		Full Primary		Intermediate		Year 7–15		Year 9–15		n (%)	
		n	(%)	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Maori	15 (34)	1	(11)	22	(24)	12	(27)	14	(27)	21	(33)	1	(100)
Spanish	5 (11)	2	(22)	11	(13)	10	(23)	8	(15)	4	(5)		
Japanese	17 (39)			22	(24)	11	(25)	16	(31)	20	(32)		
Technology	7 (16)	6	(67)	35	(39)	11	(25)	14	(27)	19	(30)		
Total	44 (100)	9	(100)	90	(100)	44	(100)	52	(100)	64	(100)	1	(100)

It was in the secondary schools that the most experienced teachers of the topic were likely to be found, with 49% of year 9-15 secondary teachers having taught the topic previously, compared to 30% of intermediate, 36% of area, 34% of full primary, and 33% of contributing primary teachers.

The teachers who taught more than one class in the topic were mostly in the area schools: 16% of area school teachers taught 2 or more classes, compared to 10% of full primary, 8% of secondary and 2% of intermediate school teachers.

On the question of whether there were advantages in teaching the topic via ITV, the least favourable response was from the year 9-15 secondary schools, with 13% of these teachers saying there was no advantage to teaching the course via ITV, compared to 9% of composite school teachers, and 2% of intermediate teachers. No primary school teachers said there was no advantage.

On the issue of whether there were problems with the ITV course, 70% of the intermediate school teachers—the level for which the courses were in fact designed—replied that there were problems, compared with 75% of year 9–15 secondary, 76% of full primary, 82% of both contributing and year 7–15, and 89% of contributing school teachers. The area school teachers considered the interaction to be of the most limited value: 16% of area teachers said so, compared to 12% of year 7–15, 11% of contributing and year 9–15, 9% of intermediate, and 3% of full primary. The area schools also reported the most difficulty with the technologies involved with the project, with 16% of area school teachers saying this was a problem, compared to 12% full primary, 11% of contributing and year 9–15 secondary, 4% of year 7–15, and 2% of intermediate. On the issue of fitting the course into the school timetable, 33% of year 7–15 teachers considered this was a problem, followed by 28% of intermediate teachers, 23% of full primary, 19% of year 9–15, 16% of area, and 11% of contributing school teachers.

Relating to the question of whether the course would have been provided without ITV, the highest percentage of teachers saying this would have happened (44%) came from year 9–15 teachers; this was followed by area 34%, full primary 33%, year 7–15 24%, intermediate 23%, and contributing 22%.

On the question of whether the ITV course helped the learning of the students, this was most often answered positively by teachers from the full primary schools: 79% said so, followed by year 7–15 71%, intermediate 70%, contributing 67%, area 59%, and year 9–15 57%.

Further use of the support material was shown to be most common in the year 7–15 secondary schools, with 51% of teachers making use of the material for teaching another class or planning to get this further use from it. Next came full primary teachers at 47%, then year 9–15 at 43%, followed by contributing and intermediate teachers, both at 33%, and finally area school teachers at 30%.

However, area school teachers were the most likely to say they found the interaction between classroom and broadcast teacher useful: 27% said this, followed by intermediate 26%, full primary 23%, year 7–15 18%, year 9–15 17%, and contributing school teachers 11%. One factor in the lower rating from the secondary schools is that when some higher level classes, such as years 9 and 10, did the courses, the students did not find the presentation interesting. This is not surprising, since it had been designed for years 7 and 8. Year 9–15 teachers were also the least likely—27%—to say that the interaction between students and the broadcast teacher had valuable aspects. This rose to 33% for year 7–15 and contributing school teachers, 41% for composite, 50% for full primary and 53% for intermediate, the target student level.

On the issue of live broadcasts, the primary school teachers were more likely to consider them essential to the course, with 56% of contributing school teachers saying so, followed by 43% of full primary and 37% of intermediate. The proportion then fell to 21% of year 9–15, 20% of year 7–15, and 14% of composite school teachers.

Overall, the primary and intermediate schools seem to have found the most value in the course, and this tallies with their having the least chance of being able to provide the courses in other ways.

RECOMMENDATIONS FOR IMPROVING INTERACTIVE TELEVISION COURSES

The many effective and valuable elements of the ITV courses

In overall terms, the ITV courses have been useful to the teachers and students in a variety of schools, and in a variety of situations. These included schools where the ITV course was the only way the course could be taught, and those where it enhanced a course already being taught. The expertise of the broadcast teachers, including native language speakers in the language courses, was recognised and appreciated by the teachers and students in the classroom. In many cases the broadcast language teacher had the role of being the only one *in* the receiving school who knew about the language and the teaching of it.

The technology was, in general terms, reliable, and confidence about integrating TV into the classroom teaching environment was high. The audio visual medium of television, combined with print material, was recognised as having much potential value, providing large amounts of information for a course in varying formats that would appeal to a range of learning styles.

The benefits of the ITV programme have raised expectations about the continuance of the ITV programmes, and a desire to see diversified provision. Calls for expansion began with varied levels in the courses offered, followed by the expansion of courses to cover gaps in what is taught at schools (such as area schools' need for Form 6 and 7 physics and chemistry), or to enable small schools to provide courses in topics such as music, where the small number of teachers do not themselves have the knowledge required.

However, alongside the recognition of advantages, there were strong indications of serious shortcomings. These need to be attended to, so that future ITV endeavours will be more successful for a greater number of participants in all aspects of the course: content, interactivity, motivation, and learning.

Responses from the broadcast teachers, classroom teachers, students, and others involved included recommendations on how to overcome the problems which emerged during the 1996 pilot phase of the Interactive Television project. These recommendations focus on:

- methods of interaction
- maintenance of effective participation in the ITV programme
- the needs of teacher professional development
- the technology requirements for enabling interaction and participation
- what would improve the course (support) material.

Interactivity

The interactive nature was not explored or done as well as it could have been. They need to decide whether they are interactive or just a broadcast.

Teacher's questionnaire comment

The low number of classroom teachers and students interacting with the broadcast teacher suggests a shortcoming in this goal of the ITV project. This was the aspect of the whole programme which came in for the most criticism.

The broadcast schedule itself was an initial barrier to watching the broadcast live, and participating in the 'phone in' interaction. The programme came live into the school at 11.00 am. For some schools, this could not fit into their timetable. Responses to the broadcast time varied from the attitude that the timetable could simply be altered to accommodate the broadcast, to asking more of students participating in the course (such as working through their morning interval to view the broadcast), to recording the programme on video in order to fit the school timetable. In addition to the 'constant' factors which influenced the numbers who watched the broadcast live, and hence the interaction possibilities it offered, individual school events, such as sports, cultural activities, and visits away from school, further disrupted "live" viewing.

This situation made worse any problems which developed in the course regarding its 'pace', and the amount of time available to reinforce the new learning of the language courses, or more fully explore the design and construction processes in the technology course. Often sufficient time was not available in the week allocated for a particular lesson. The weekly broadcast schedule would place a new lesson in front of the class in a week's time. If the previous lesson was missed entirely, or the material was not fully understood, then comprehension was compromised in subsequent lessons.

When student/broadcast teacher interaction did happen, it was criticised for being ill-prepared, or containing little of value in terms of teaching points. Other criticisms highlighted the severe time constraints on when the call could be made and how long it could last, due to the call having to be made in the half hour of live broadcast time.

One notable finding was that the proactive contact with classroom teachers initiated by the Spanish course broadcast teacher contributed greatly to the feeling that there was an 'interactive' element with a valuable point of connection between broadcast and classroom teachers and their students. This proactive communication, together with a more dynamic presentation style, meant that the Spanish course ranked highest for course effectiveness in terms of interaction.

Teachers made various suggestions for overcoming the problems they found in the interactive components of the ITV course:

- Ensure student interaction with the broadcast teacher has a purpose and is directed with an achievement in mind.
- When presenting the material for the first time via television, to help with that first capture of the student's attention, make full use of the medium. Suggestions included using cartoons with recognisable characters, as a variation on the teacher's board, the written word, and the teacher's presentation.
- Vary the methods by which interaction may be achieved, and consider the scale of the interaction. The number of students must be taken into account: a few minutes a week is insufficient for 1000

students. Options on how the interaction is to take place should be available for participants: telephone, computer e-mail, fax and postal mail should all be available, depending on the users' capacity and preference. The timing of the interaction needs to be varied between the broadcaster and the classroom. Activities such as 'phone bridge' conference calls could allow for two or three classes to link simultaneously to a teacher such as a language facilitator (who need not be the broadcast teacher). A half hour session would enable most, if not all, of the students to talk to the broadcast teacher in a less hurried way, and with a directed educational purpose, over and above greetings and one or two questions.

- A culture of interactivity needs to be encouraged before interaction can become the norm for all students. Making interaction possible needs to be accompanied by reasons for attempting it, with the teaching advantages explained.
- Timetabling the course flexibly, and allowing it to fit into the maximum number of school timetables, might just outweigh the benefits described from the course being live. The interviews highlighted the fact that a number of teachers had not been able to fit the course into the timetable. The course was subsequently dropped or participation in it was reduced. Teaching schedules of six day weeks, and multi-week topic blocks, also make a weekly broadcast schedule unrealistic for a number of schools. Allowing schools some say over when the teaching of the course and the interaction takes place may help to solve the timetabling problems with ITV courses.
- The pace of the course became too fast too quickly for some respondents, especially those students and teachers doing the language courses. Allowing more revision time, for example by interspersing blocks of new material with breaks for revision or other related language learning activities, such as cultural activities, would allow classroom teachers to match the course better to their students' learning capabilities and speed.
- Participation in the course needs to be nurtured and not taken for granted. A feedback mechanism that actively examines how teachers and students are managing with the course would help deal with both pacing issues and lack of knowledge about the course (especially in the language courses) by the classroom teacher. It would help overcome these difficulties by assisting the classroom teacher to keep participating in the ITV course.
- Classroom teacher feedback would be assisted by regional facilitators who could act as a local source of teaching assistance, provide expertise in the topic, and advise on problems that may occur during the course.
- Teacher groups, meeting either face to face or via a computer discussion group, would allow teachers to discuss course content, interaction, effectiveness, teacher professional development, and the topic or teaching it in general, on a regular basis. The computer linkage option should be inexpensive and fairly immediate, so it would suit many teachers. A computer discussion group would also be a quick way for the broadcast teacher to find out the issues for the classroom teachers, and allow more direct interaction with them.

Teacher Professional Development

Yes, I now have a basic understanding of Japanese and with the resources feel competent to teach it again.

Teachers' questionnaire comment

Many teachers said that for them, the course had provided elements of professional development. This came about not only through increasing knowledge of the curriculum area, but also through becoming aware of new teaching strategies, learning how to incorporate these into teaching, and learning how to use technology in a new way, with the TV programme as an initial deliverer of the lesson, then a reference to go back to. However, a number of teachers did not learn how to speak a second language during the course, nor did they describe themselves as being confident to teach it again.

Several points were raised as relevant for teacher professional development:

- The languages especially needed a more structured and systematic approach, so as to enable the classroom teachers to play an effective part (especially in the language classes) in the learning of the topic. Suggestions included a pre-course meeting or in-service training day to introduce the topic, what was involved in teaching it, how it was going to be taught, and the technology involved in the delivery of the course and the interaction. This initial training event should have a follow-up period before the start of the teaching year, to enable the classroom teacher to become familiar with the topic, start to learn it if it is new to them, and consider how their students are going to learn it.
- A regional facilitator could lead in-service training and familiarisation, initiate the feedback process on how the course was going, include the recommended improvements that came forth, and in general facilitate a teaching community of ITV teachers, while encouraging a 'culture of interaction'.
- The ITV course often put the teacher in the role of learner alongside the students. This could be more acceptable to some teachers than others. It raises the issue of whether the teacher knows enough to answer the students' questions, and if not, what happens. At this stage another student, the broadcast teacher, a reference available to the classroom teacher, or a regional facilitator could supply the answer. The professional development or training of the classroom teacher must contain features allowing for this.

The support material

The general conclusion about the support material was that it was helpful and worthwhile; yet some helpful refinements were identified. These included:

- A clear and concise year plan of what the course will involve, what is core, and what, if anything, is optional
- Ensuring that audio tapes, and video tapes if they are supplied, are clearly indexed to make referring to them easier
- Adding extension material so that options could be included in the course
- Providing a means of assessment

- Improving the vibrancy of the material, for example by adding colour and improving the graphics.

The technology

The reception of the broadcast signal was in overall terms satisfactory, and signal delivery was reliable. An initial hurdle was becoming familiar with the equipment; yet once this was overcome, the technology operated efficiently. Telephone communication between the students and the broadcast teacher raised some concerns. As well as the obvious difficulty of many students trying to get through on too few phone lines and too little allocated time, some respondents reported static and hearing difficulties. Some of the recordings broadcast also had very poor sound quality, making hearing difficult. This is likely to be because of the way off-site recordings of material were made. For the technology to enable ready communication and interaction, the following suggestions were made:

- Provide variety in the means of communication, so that the most suitable medium can be selected by participants. Phone conferences, computer discussion facilities, or other methods could be selected. This would promote interaction by overcoming small communications capacity (only a few live to air phone calls available a week) and inaccessibility (for example, no telephone in the teaching room). It would be simple, inexpensive and reliable enough to encourage interaction to occur.
- The standard of recorded TV segments needs to improve, so that clear hearing and viewing is attainable.

The ITV pilot year

The results of the ITV pilot year show that the idea was accepted as worthwhile. However, only some teachers were able to fully participate in the course. Teachers clearly needed more professional development. The interaction was an obviously problematic aspect; it requires the most attention, in order to overcome timetabling, pace and participation difficulties.

The expectation that ITV can deliver a course which is not available through other means was met. There was also recognition that proficient teachers are making the programme. Essentially, therefore, it is the delivery that needs to be improved. The goal now should be to improve the ability of teachers and students to interact with the ITV programme, and enhance teachers' confidence about teaching a topic in an environment where they are learning it themselves.

The value of the courses to the schools, teachers, and students taking part can be seen in the following comments from classroom teachers:

Rural schools benefit especially, as this provides another method of teaching, and a wider curriculum choice for our students.

Urban schools also need to maintain as wide a variety of courses as possible to attract students.

The call from the schools is to continue the ITV programme, with more variety and improved interactivity.

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Interactive Television Project Evaluation

Teachers' Questionnaire

This questionnaire is part of the evaluation of the Correspondence Schools Interactive Television project, commissioned by the Ministry of Education, and undertaken by the New Zealand Council for Educational Research (NZCER).

NZCER is an independent organisation whose purpose is to promote quality education for New Zealanders through research and resources, advice and information.

The Council's staff adhere to a statement of ethics which ensure that your responses will be held in **complete confidence**. Individuals will not be identifiable in any way from this study. The questionnaire is coded solely for the purpose of administering the responses.

The objective of this study is to assess the environment and effectiveness of interactive educational TV broadcasts.

Instructions

Please answer this questionnaire
*by ticking all boxes that apply, or by circling a response,
and/or by writing in the space provided.*

Please answer one questionnaire for *each course taught with ITV*.

**This questionnaire should take about 20 minutes to complete.
Please return the questionnaire by Wednesday 20th November.**

Part A
Teaching with Interactive Television in 1996

1) What course did you teach in the Interactive Television (ITV) programme?

- ☐ a) Maori ☐ b) Spanish ☐ c) Japanese ☐ d) Technology

2) Have you taught this subject prior to the ITV programme?

- ☐ a) Yes ☐ b) No *(If you answered No, please go to Question 3.)*

c) If you answered *Yes*, for about how many years? _____ 1 2 3 4 5 6 7 8 9

d) If you answered *Yes*, for about how many months? _____ 1 2 3 4 5 6 7 8 9

e) If you answered *Yes*, at what levels have you taught this subject *(Please tick all that apply.)*

- ☐ f) Under Year 7 ☐ g) Year 7 ☐ h) Year 8 ☐ i) Year 9 ☐ j) Year 10 ☐ k) Over Year 10

☐ l) Other years or class levels *(Please describe.)* _____ m 1 2 3 4 5 6 7 8 9

3) How many classes in this topic did you teach with this ITV course? _____ 1 2 3 4 5 6 7 8 9
(Include any taught with a video of the broadcast.)

4) How many students in total did you teach in this ITV course? _____ 1 2 3 4 5 6 7 8 9

5) What year level were your students in for the ITV teaching? *(Please tick all that apply.)*

- ☐ a) Under Year 7 ☐ b) Year 7 ☐ c) Year 8 ☐ d) Year 9 ☐ e) Year 10 ☐ f) Over Year 10

☐ g) Other years or class levels *(Please describe.)* _____ h 1 2 3 4 5 6 7 8 9

6) Are there advantages in teaching this topic with ITV?

(Please explain by saying what has influenced your opinion.)

- ☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3

4 5 6

7 8 9

7) Are there any problems in teaching this topic with ITV?

(Please explain by saying what has influenced your opinion.)

- ☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3

4 5 6

7 8 9

8) Is it likely that this course would have been provided this year *without* the ITV project?

(Please explain by saying what has influenced your opinion.)

☐ a) Yes

☐ b) Unsure

☐ c) No

d 1 2 3

4 5 6

7 8 9

9A) Do you video record the broadcasts?

☐ a) Yes

☐ b) No

9B) If you *do* record them, what is the reason? *(Please go to question 10 if not recording broadcasts.)*

☐ a) Rewatch the lesson

☐ b) Only view the lesson by video

☐ c) Other *(Describe.)*

d 1 2 3

4 5 6

7 8 9

10) Do you think the ITV course provided a *unique advantage* for your student's learning?

(Please explain by saying what has influenced your opinion.)

☐ a) Yes

☐ b) Unsure

☐ c) No

d 1 2 3

4 5 6

7 8 9

11) If you felt the ITV course does have a *unique advantage* for students' learning, do you think there is *another* way to achieve this?

(Please go to question 12 if you think there is no advantage for students' learning via ITV.)

☐ a) Yes

☐ b) Unsure

☐ c) No

(Please explain by saying what has influenced your opinion.)

d 1 2 3

4 5 6

7 8 9

12) Please describe your view of the relative roles in the students' learning of the "broadcast teacher" and the "classroom teacher".

a) Broadcast teacher

a 1 2 3

4 5 6

7 8 9

b) Classroom teacher

b 1 2 3

4 5 6

7 8 9

Part B

Professional Development

13) What training or preparation did you have before participating in the ITV project with your class?

- ☐ a) Training video
 ☐ b) Training broadcast
 ☐ c) ITV project Newsletter
☐ d) Access to a "teacher's pack"
 ☐ e) Background material from the Correspondence School
☐ f) "In-school" planning or discussions
 ☐ g) Other training or preparation (*Please describe.*)

h 1 2 3

4 5 6

7 8 9

14) How prepared did you feel for the ITV broadcasts prior to the start?

Neither prepared

Very Unprepared *Unprepared* *or unprepared* *Prepared* *Very prepared*
 1 2 3 4 5

15) Please describe anything that you felt helped your preparation?

1 2 3

4 5 6

7 8 9

16) Please describe anything that you felt hindered your preparation?

1 2 3

4 5 6

7 8 9

17) Is there anything else you would like to see as part of teacher preparation? (*Please explain.*)

- ☐ a) Yes
 ☐ b) Unsure
 ☐ c) No

d 1 2 3

4 5 6

7 8 9

18) To what extent has the ITV pilot programme contributed to your understanding of the curriculum area you taught in the ITV project?

Not at all *Marginally* *Moderately* *Highly* *Very highly*
 1 2 3 4 5

19) Do you think that new technological skills are needed by teachers to participate in teaching with ITV? (*If Yes, please list what skills are needed.*)

- ☐ a) Yes
 ☐ b) Unsure
 ☐ c) No

d 1 2 3

4 5 6

7 8 9

Part C

Contribution of the Support Material

20) How useful was the support material (teacher's pack, and audio cassettes for language classes, etc.) for your teaching with the ITV programme?

Not at all useful *Somewhat useful* *Moderately useful* *Quite useful* *Very useful*
 1 2 3 4 5

21) Was there any single part of the support material that you thought contributed most to students learning the course? (Please describe.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3
4 5 6
7 8 9

22) Are there changes you would like to see to the support material? (If Yes, please describe.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3
4 5 6
7 8 9

23) What was the most useful aspect of the support material for use during the broadcasts?

1 2 3
4 5 6
7 8 9

24) What was the most useful aspect of the support material for the classes between the broadcasts?

1 2 3
4 5 6
7 8 9

25) Did you add any lesson material to the course?

(Please describe what, if anything, you added to the course.)

☐ a) Yes ☐ b) No

c 1 2 3
4 5 6
7 8 9

26) Have you used, or do you intend to use, the support material further, e.g. in other classes? (If Yes, please describe your actual or intended use.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3
4 5 6
7 8 9

Part D

Integration and Interaction

27) How well did you find the broadcast lesson fitting into the classroom lessons in the project?

<i>Not very well</i>	<i>Marginally</i>	<i>Adequately</i>	<i>Quite well</i>	<i>Very well</i>
1	2	3	4	5

28) Did you find that the communication mediums (TV, phone, and fax) worked well together during the course?

<i>Not very well</i>	<i>Marginally</i>	<i>Adequately</i>	<i>Quite well</i>	<i>Very well</i>
1	2	3	4	5

29) Was there any communication between you and the broadcast teacher during the course?

<i>None at all</i>	<i>Small amount</i>	<i>Moderate amount</i>	<i>High amount</i>	<i>Very high amount</i>
1	2	3	4	5

30) Was there anything that was useful to your teaching in the interaction between you and the broadcast teacher? (Please describe.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3

4 5 6

7 8 9

31) Was there anything that hindered communication between your class and the broadcast teacher? (Please describe.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3

4 5 6

7 8 9

32) How would you rate your students' engagement with the broadcast teacher for learning purposes?

<i>Very low</i>	<i>Low</i>	<i>Adequate</i>	<i>High</i>	<i>Very high</i>
1	2	3	4	5

33) Were there valuable aspects to the interaction between students and the broadcast teacher? (Please describe.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3

4 5 6

7 8 9

34) Were there least valuable aspects to the interaction between students and the broadcast teacher?

(Please explain.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3

4 5 6

7 8 9

35) How did you find the "pace" of delivery of the course material?

<i>Much too slow</i>	<i>Too slow</i>	<i>About right</i>	<i>Too fast</i>	<i>Much too fast</i>
1	2	3	4	5

(Please explain.)

b 1 2 3

4 5 6

7 8 9

36) How effective a teaching environment did you feel occurred with the situation of a broadcast teacher, a classroom teacher, and classroom students?

<i>Not at all effective</i>	<i>Marginally effective</i>	<i>Adequately effective</i>	<i>Quite effective</i>	<i>Very effective</i>
1	2	3	4	5

(Please explain.)

b 1 2 3

4 5 6

7 8 9

37) Do you think the "live to air" nature of the ITV broadcast lesson is essential to the course?

(Please explain.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3

4 5 6

7 8 9

38) Do you have any suggestions for improving the interaction between the broadcast teacher, the classroom teacher, and the classroom students?

(Please explain.)

☐ a) Yes ☐ b) Unsure ☐ c) No

d 1 2 3

4 5 6

7 8 9

Part E

Using the ITV Technology

39A) Did you have any difficulty with the equipment? *(Please tick all that apply.)*

- ☐ a) Yes
 ☐ b) Unsure
 ☐ c) No
☐ d) Getting any of the equipment
 ☐ e) Installing it
 ☐ f) Ensuring it worked

39B) If you did have difficulty, please indicate with what and then describe the difficulty.

- ☐ a) SKY TV decoder
 ☐ b) Satellite decoder
 ☐ c) Satellite dish
☐ d) Connecting cables
 ☐ e) TV set
 ☐ f) Video cassette recorder
☐ g) Fax machine for course use
 ☐ h) Phone for course use

1 2 3

4 5 6

7 8 9

40) Did you make any changes to the classroom layout or location to prepare for ITV teaching?
(If you did, please describe them.)

- ☐ a) Yes
 ☐ b) Unsure
 ☐ c) No

d 1 2 3

4 5 6

7 8 9

41) Do you feel that you have reliable support to maintain the equipment?
(Please explain.)

- ☐ a) Yes
 ☐ b) Unsure
 ☐ c) No

d 1 2 3

4 5 6

7 8 9

42) How do you find the reception quality of the broadcast?

<i>Very low</i>	<i>Low</i>	<i>Medium</i>	<i>High</i>	<i>Very high</i>
1	2	3	4	5

43) What is your overall level of confidence with the technology used in the ITV project?

<i>Very low</i>	<i>Low</i>	<i>Medium</i>	<i>High</i>	<i>Very high</i>
1	2	3	4	5

44) Do you have any comment on how the different communication technologies integrate for classroom use? (e.g., placement and availability of TV, phone, and fax.)

1 2 3

4 5 6

7 8 9

Final Questions

45) What are your overall views of the ITV method of teaching?

1 2 3

4 5 6

7 8 9

46) How do you think the ITV method of teaching could be made more effective?

1 2 3

4 5 6

7 8 9

47) Have you any comments about ITV's contribution to professional development?

1 2 3

4 5 6

7 8 9

48) Do you have any other comments or suggestions about the support material?

1 2 3

4 5 6

7 8 9

49) Do you have any other comments about the ITV project?

1 2 3

4 5 6

7 8 9

Thank you very much for your time and energy in completing this questionnaire. Could you please now send this questionnaire back to NZCER in the postage-paid envelope provided.

Interactive Television Evaluation Project Co-ordinator
NZCER
PO Box 3237
Wellington

If you have any queries please contact:
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Interactive Television Students' Questionnaire

Instructions:

*These questions are to find out about what *you think* of the Television course you are doing.

*Please tick one box, or circle one number, when the question has a row of numbers.

*When there are lines below a question, please write an answer.

*Ask your teacher to help if you are having trouble answering any question.

1) What courses are you doing in the Interactive Television (ITV) Programme?

☐ a) Maori

(Tick the box of ALL you are doing.)

☐ b) Spanish

☐ c) Japanese

☐ d) Technology

2) What year in school are you this year? (Tick the box showing your year.)

☐ a) Under Form 1

☐ b) Form 1

☐ c) Form 2

☐ d) Form 3

☐ e) Form 4

☐ f) Over Form 4

3) What do you like most about the ITV course?

1 2 3

4 5 6

7 8 9

4) Does the TV presenter help you learn the topic?

☐ a) Yes

☐ b) I do not know

☐ c) No

(Please say why.)

d 1 2 3

4 5 6

7 8 9

5) Does the classroom teacher help you learn the topic?

☐ a) Yes

☐ b) I do not know

☐ c) No

(Please say why.)

d 1 2 3

4 5 6

7 8 9

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6) Do you have any trouble using the telephone or the fax as part of this course?

- ☐ a) Yes ☐ b) I do not know ☐ c) No
☐ d) I have not used the telephone or fax as part of this course.

(Please explain.)

_____	e 1 2 3
_____	4 5 6
_____	7 8 9

7) Does the course go too fast for you, too slow for you, or about right?

(Please circle one number.)

<i>Much too slow</i>	<i>Too slow</i>	<i>About right</i>	<i>Too fast</i>	<i>Much too fast</i>
1	2	3	4	5

8) List three things about the TV course which are not in ordinary classes.

I) _____	1 2 3
II) _____	4 5 6
III) _____	7 8 9

Thank you very much for answering this questionnaire.
Could you please now hand it to your teacher.

Interactive TV evaluation project- Teachers Interview Schedule

1. How did you come to be teaching in the ITV project ?
How enthusiastic are you about the project and it's possibilities?
2. What topic/s are you teaching, and have you taught this topic/s before?
* Is this a new topic brought into the school, or new part/material/aspect in the topic? Is modifying or expanding or changing the structure and regularity of the existing teaching programme.
* What is this courses' (if a language course) place in second language teaching in this school?
3. The ITV Course content, how well does it fit into your teaching programme?
* The mix of new material & revision, do you think that is about right?
4. How were the students selected for participation in the course?
5. What level do you think the course is pitched at?
6. Pacing of the course and timing of each lesson; too fast, too slow, or about right?
7. About the TV presenters interaction with your class,
how effective for teaching do you feel this is? Eg. The phone in's?
8. What preparation did you have for ITV teaching?, was it enough?
What preparation did your students have?, was it enough?
9. Expectations, has this course raised expectations among students, teachers, principals, BOTs, and parents that such a programme will continue?
10. Has there been any thought on charges for such a course in the future?
11. The Broadcast, what sort of timetabling issue was it to get all the 3 classess into the timetable? (Broadcast and two classroom classes)
* What allowances are there for "missed classess"?,
* How often do your students phone or fax a response to the broadcast teacher?
12. Do you have contact with the broadcast teacher at all?
* Do you feel teachers should have contact?, the benefits of such contact are?
13. Is the course videoed?, to what use is this put?
14. Is the TV component of this course watched live or via Video?
15. The support material, what is the best element of it?, what might improve it?
16. Do you face any technical setup or operation issues; e.g training, maintenance, repair?
* What is the students access to phone and fax-between and during broadcasts,
* Do you feel that technical skills are needed by teachers using ITV?
* What is the quality of reception?
17. Teacher professional development.
* Has it contributed, eg in knowledge of the curriculum, new teaching environment?
* Do you see any potential uses in this area?
18. To summarise- do you feel there are benefits to ITV teaching compared to classroom teaching?
19. Anything else?

Thank you.

Interactive TV evaluation project- Student Interview Schedule

1. What course are you doing?
2. What form in school are you?
3. Were you asked if you wanted to do this course, or were you, or your class, chosen?
4. When do you meet for classes?
In class time or your own time such as lunch time or after school.
5. Are the other pupils in the course with you all from one class, or from many classes?

6. What do you *like* about the ITV classes?
7. What do you *not like* about the ITV classes?
8. Can you hear and see the teacher on TV clearly?
9. Does the TV presenter help you learn the topic?
10. Does your classroom teacher help you learn the topic?

11. Have you phoned or faxed the Broadcast teacher?

*What did you think of that?

*Were there any problems in phoning in?

12. Does the whole course go at the right speed for you?
13. Does each broadcast lesson go at the right speed for you?
14. What do you think is different in the ITV course to your normal classes ?
15. Do you compare Correspondence School ITV course to the
TV stations you might watch at home?
16. Is there anything else would like to say about this ITV course?

Thank you.

Observation Guide

The Classroom Situation

- *The room type is?
- *Do students go there from classroom or is it the normal classroom?
If they go there from classroom, is it to Library, AV suite, lecture room, lab
- *Location of TV, is there a phone in the room, and fax?
- *Seating of students, floor, carpeted tiered seating, or desks? using pens and paper?
- *Number of students
- *Number of staff

Interaction

- *Do students talk back to TV in language classes?, with enough time?
- *Broadcast exercises - do all students do them?
- *Questions to teacher in class, does this happen?
- * What type of classroom teaching occurs, answering questions, guiding class or individuals, etc?
- * Do any students make phone calls to the teacher?

Involvement and interaction

- * Attention of students in ITV classes (roughly observed percentages)
 - Watching percentages throughout the broadcast
 - Are they paying attention to the Broadcast teacher (I/e interaction)
- * Is the Classroom teacher interacting with students, paying attention to the Broadcast teacher or not?

Anything else that stands out?

Correspondence School Teachers interview schedule

- 1 Is all the material aimed at the same level of student? What level is that?
 - *Have all course components been selected from one level of the curriculum?
 - What is it like being all teachers to all students?*
- 2 Differences within the course?
 - *What influenced the selection of the course components that you have included in your course?
 - **Technology*- all the different construction materials that the students can use for the various tasks, has there been feedback on the different requirements for materials, tools and knowledge /experience in handling these?
 - ***Languages**- are there any dialect differences that cause confusion among course participants?
 - *Apart from teaching via TV are there any teaching differences that stand out for you?
- 3 What range of students levels/ages do you hear from during feedback?
 - *Is this what you expected?
- 4 The timing of your course-
 - *Have you had any feedback about the timing within each class, For example speaking back the words to the TV screen during *language* study or getting all things done an in a *technology* exercise?
 - *The pace of the course overall, any feedback about it being too fast or slow?
 - *The mix of new material and revision, have you had any comment on that?
- 5 The interaction, do you think it is as valuable and efficient as in class teaching?
 - *The phone in's- do they achieve the objectives you have for them?
 - *Are students asked to phone in during the programme broadcasts?
 - *What approximate percentage of teachers have you had any contact with on teaching matters?
 - *Do you think it necessary that you do have contact with the teachers in the classrooms?
- 6 Teacher professional development, any comments on this to date, or about its potential?
 - *Comparing teachers who can speak the language and teachers who cannot.
- 7 How good do you think the medium is for teaching your topic?
- 8 Any thoughts on student to student interaction? Or students in the broadcast studio?
- 9 How satisfied are you with the way the ITV course is going?
- 10 What are you hoping for from the ITV programme for the future?